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February 1925

No. 2

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment and Administration of Hospitals, Sanatoriums and Allied Institutions, and to Their Medical, Surgical and Nursing Services

Vol. XXIV

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No. 2

APPLICATION OF SOCIAL SERVICE TO THE PROBLEMS OF THE SMALL HOSPITAL*

BY MARTHA J. MEGEE, SOCIAL SERVICE CONSULTANT, DEPARTMENT OF WELFARE, HARRISBURG, PA.

SOCIAL service has been described as seeking to understand and treat the social complications of disease by establishing a close relationship between the medical care of patients in hospitals and dispensaries and the service of those skilled in the profession of social work, and to bring to the institutionalized care of the sick such personal knowledge of their social conditions as will hasten and safeguard their recovery.

Many hospitals have realized the need of this service and in the last fifteen years social service departments have been established in both large and small hospitals all over the country so rapidly that it has been impossible to meet the requests for competent workers to undertake the organization of such departments.

It is interesting to have the subject of the small hospital given a place in these conferences, since in the classification of hospitals according to

size, condensed from a 1923 survey made by The Modern Hospital Publishing Company, the figures show the small hospitals outnumbering the large ones and the hospitals in small cities and

rural communities outnumbering those in the large cities. Fifty-six per cent of all hospitals have forty beds and under, twenty-one per cent have between forty-one and 100 beds, making a total of seventy-seven per cent of all hospitals having less than 100 beds. According to population, forty-nine per cent of all hospitals are in cities of less than 10,000 population or in rural communities. The needs of the small hospital in the the small or rural community, therefore, deserve our careful consideration.

Does the forty-bed hospital need social service? Let us revert to our definition or description of social

Growth of Social Service

"... In the last fifteen years social service departments have been established in both large and small hospitals all over the country so rapidly that it has been impossible to meet the requests for competent workers to undertake the organization of such departments."

"In small hospitals the finances are often inadequate for the actual needs of the hospital; the patients are few and the position of social worker would not be sufficiently interesting either in opportunities for service or financially to attract a good worker; under these conditions shall we encourage the small hospitals to organize social service departments or shall we substitute something else? If the latter, what shall we substitute and how shall we make it effective in improving the service to patients and the community?"

service.

"Seeks to understand and treat the social complications of disease."

(1) By establishing a close relationship be-

*Read before the small hospital section of the Buffalo Conference of the American Hospital Association, October 6, 1924

tween the medical care of patients in hospitals and the service of those skilled in the profession of social work.

(2) By bringing to the institutionalized care of the sick such personal knowledge of their social condition as will hasten and safeguard their recovery.

Do the patients in the small hospitals have social complications?

In order to see if the problems presented to the small hospitals differ materially from those of the large hospitals, I made inquiry of the nature of the work being done in a number of large hospitals and compared the statements with conditions found in small hospitals. I found that the work fell into the following general lines:

- Care of or provision for chronics
- Change of occupation—rehabilitation
- Convalescent care
- Follow-up for further medical care
- Home adjustment in heart and mental cases
- Home instruction in child care
- Prenatal and postnatal work
- Care of family while bread winner is in hospital
- Care of small children while mother is in hospital
- Care of aged who are ill and no longer suitable for hospital care
- The unmarried mother
- The patient with venereal disease, and so on.

This is a long enough list for comparison; let us see whether these conditions are only found in large hospitals and large cities. A study of the credit cards made by a visiting medical social worker from the Pennsylvania State Department of Welfare for the purpose of deciding on free, part-pay, or full-pay treatment revealed *all* of the problems stated above and many others and an additional difficulty of poverty of community resources to meet these needs; there may be only a few in each hospital but their needs are very real and some plans must be made to meet them, if the small hospital is to discharge its full obligation to the community.

A Neglected Child

Stanley Wodjeski (not his real name), age 13, had his arm broken while playing on his way home from the rural school; his parents were very angry with him for being hurt and beat and abused him and refused to call a doctor. After hours of suffering, he was brought to the hospital by neighbors who had interfered. He was accepted as a free case regardless of his parents ability to pay and was given the best of care for thirty-nine days; his mother never came to see him and his father came only once; he was a very much undernourished and undersized child, and when he was well enough to discharge he was taken to his home by some of the employees of the hospital; the parents were not home but the boy was left there and nothing further was done. That there were resources in the community that could be used by a socially minded person is evidenced in the statement that "neighbors who interfered" brought him to the hospital; the poor little

chap had many social needs which his admission to the hospital revealed.

A Motherless Family With a Small Baby

Mrs. Mary Brown died in childbirth leaving the baby and five other small children. The baby became ill because of improper feeding and had to be admitted to the hospital; the husband earned \$25 per week and wanted to keep his family together. He was urged to pay the full rate because of his income, no consideration being given to the needs of the rest of his family; and after twenty-six days in the hospital, the baby was discharged. What is to prevent a recurrence of the baby's illness and what kind of care are the other children receiving while the father is away at work and how can the full charge be justified?

Reeducation or Rehabilitation

Frank's mother died of the 'flu' in 1918 and he was thirteen years of age, the second oldest in a family of five, his sister Mary, age fifteen, kept house as best she could and father earned a fair living in the coal mines. In 1919 his father was killed in a mine explosion and through workmen's compensation some support was received until each child became sixteen;—the job was too much for Mary and when she was sixteen, she asked the trust company to place the younger children and she earned her living as a domestic. Frank was put on a farm where he was overworked for his board and keep,—he rebelled; went to work in the mines, developed typhoid fever and on convalescence was found to have a tuberculous condition in his ankle; amputation was decided upon and a big hospital in a small city which brags about no interest in social service admitted him for the amputation; "operation successful and patient discharged cured"; he was given a pair of crutches on discharge. Had Frank a social problem and had the hospital any obligation to him? There were resources in the community for rehabilitation and relief, but he had to spend two years in a county home, no educational opportunities, no training, association with only the incompetents that fill the men's outwards of the poor houses; until a delinquent deaf and dumb boy was sent there who induced Frank to join him in making an escape. In a distant city of another state he was homeless and applied for work. This brought him to the attention of social workers and his own community resources were used to provide him with a good artificial leg and maintenance while he was given training for a useful occupation. Frank is now in training and is making good, but it is only the rarest good luck that he did not become delinquent as his comrade did and "wind up" in jail.

What a different story is that of George, the seventeen year old colored boy, traveling with a circus. He was injured in his work and taken to the small hospital in the town; the show went on and he was found by the credit worker to be homeless, friendless and penniless. This credit worker who had a social mind and some imagination secured the interest of a colored minister in the town and he befriended the lad on his discharge, found him a home and a job and he is now a good working member of the community.

These are actual cases met by workers in small hospitals in small city or rural communities in Pennsylvania during the last ten months and many more just as striking as these could be given from experience except for the limitation of time.

In small hospitals the finances are often inadequate for the actual needs of the hospital; the patients are few and the position of social worker would not be sufficiently interesting either in opportunities for service or financially to attract a good worker; under these conditions shall we encourage the small hospitals to organize social service departments or shall we substitute something else? If the latter, what shall we substitute and how shall we make it effective in improving the service to patients and the community?

Credit Departments Required

In Pennsylvania, the hospitals receiving state aid are required to have credit departments or a credit worker whose business it is to secure certain information about the financial status of all patients asking for free or part-pay service; this information is recorded on a form or credit card and signed by the patient or a responsible person—and contains a great deal of social information about the patient, his family, income, employment, nature and duration of illness, etc., and decision as to his rating as free, part-pay, full-pay, etc., is based on the information secured by the worker and recorded on the card; these cards are then surveyed by a traveling medical social worker and approved or rejected on the basis of this information.

In 1922 in Pennsylvania, thirty-five per cent of all patients in hospitals under fifty beds in rural communities and thirty-nine per cent in city communities received free treatment; it is safe to say that of these a very large proportion were in need of social as well as medical service.

A great many social problems have been revealed by the credit cards, even though the work is done by young and inexperienced clerks. In such instances the information is not used for the benefit of the patient or the community but simply as a basis for a decision as to pay or free. Where this work is done by socially minded, if not socially trained, persons, the problems or needs presented are sure to arouse interest in securing suitable service, and the "relationship between the medical care of the patients and the service of those skilled in social service" in the community is established as well as bringing to the attention of the physicians a knowledge of the social condition of the patients.

When Credit Work is Heartless

Credit work can be cold, calculating and heartless, can deter people from applying for much needed medical care, can be most unjust where decisions are based on appearances or where information is secured by demand and by an unsympathetic worker but it can be a real service

when done by the right person. Credit work must not be considered as social service but it must be socially administered and interpreted to get the best results. I would recommend, therefore, as one means of securing a form of social service for the small hospital, that a person possessing native ability, maturity, good judgment, sympathetic understanding be selected to conduct the credit work of the hospital and that this worker shall be given the opportunity to spend a short period, not less than one month, in a well-organized social service department before beginning the work and that she be allowed to visit other hospitals occasionally to get more knowledge of the social service end of the work so that she may more intelligently conduct her credit work and secure the cooperation of the community resources in the problems which arise out of it.

There are in many communities some form of community service which could be used to assist the hospital; many of the problems met by these agencies arise in the illness of some member of the family; they need the service of the hospital as well as the hospital needs them; in one county in Pennsylvania the cooperation between the Red Cross and the hospital is so close that the best possible service is rendered to both which means good service to all the patients.

The following case illustrates this point.

A woman suffering from tuberculosis applied for care at a hospital. She had a husband and three children; husband was earning eighty dollars per month; he agreed to pay twenty dollars per month for care of his wife. The Red Cross knows his brother who is able to assist him financially, if necessary, is having the children under clinical supervision and keeping in close touch with conditions in the home and the patient in the hospital.

Trained Worker Pooled by Agencies

In some communities it has been suggested that a number of agencies could get together and secure the services of a trained worker, sharing the expense and thus making it possible for them to secure a high grade worker; such a worker in a small community could serve as family welfare worker, Red Cross, children's worker, hospital worker with a committee composed of people interested in all of these branches of work.

Another suggestion would be that several small hospitals in adjacent communities secure the services of a good social worker to divide her time among them or to supervise and direct the work of credit workers or volunteers in the community who could be called in for this service. I believe this is being tried in St. Louis and the work of the Pennsylvania state department of welfare field representatives is similar to this.

Some hospitals want to see the return in dollars

and cents of a social service program. They do not consider this in other branches of hospital work, but possibly because of long time hospital abuse, (for which the hospital is partly to blame) or because of the need of additional income to meet the greatly increased cost of hospital care, this new field of hospital service is supposed by many to be the remedy for and the means of meeting these conditions. The person who undertakes the social work in these hospitals must be able to prove the value of her service, and if this can be done through thoroughly socialized credit work perhaps the far-reaching, although intangible, results will help to bring about the better understanding of the social needs of the patients and an extension of the service of the hospital into the community, an extension which will further establish it as one of the greatest of social agencies.

Plan of Pennsylvania Department of Welfare

I would like to outline the plan of social service extension as operated by the State Department of Welfare in Pennsylvania. As stated before, all hospitals receiving state aid are required to have credit workers or departments; in the state department, there is a social service consultant and four field representatives who are experienced hospital social workers; the territory is divided into four parts and a worker assigned to each of these; her duties are to visit the hospitals in her district, go over the credit cards, approve or reject them for free or part-pay service on the basis of information on the cards; help the credit worker to identify social problems indicated on the cards and suggest ways of dealing with these problems.

The field representatives often find that the credit workers know a great deal about the local conditions, such as industrial situation, unemployment, wages for certain occupations, etc., and also that they are often very much concerned about the social problems of the patients, and welcome the help which the field representatives are able to give in solving them. The field representatives often look up the resources of the community and advise the credit workers how to make use of them, often taking up definite problems with these resources and establishing cooperation between them and the hospital; some of these resources are the local Red Cross chapters, King's Daughters, Family and Child Welfare Organization, state, school, and community nurses, mothers' assistance trustees, probation officers, women's clubs, rotary and other men's clubs, but we have found it necessary to have someone to make the contact and interpret the one to the

other. To sum up then:

(1) The small hospital and the small city or rural community is a very important factor in the whole hospital situation in the United States.

(2) The patients in these hospitals have just as many social needs as the patient in the large city hospitals.

(3) The small hospital *needs* social service. The suggestions I have tried to indicate are concretely:

(a) Cooperation with local welfare agencies in the community on a definite basis with an understanding on the part of both hospital and agency as to service one can reasonably expect of the other.

(b) Securing the services of a trained worker by cooperating with other agencies in the community and paying a share of the expense of such worker.

(c) Several small hospitals in adjacent communities combine in securing the services of a trained social worker.

(d) The appointment of a socially minded credit worker and giving her opportunity for observation in well-organized social service departments and advice and help in carrying on her work by means of a traveling hospital social worker, either from the American Association of Hospital Social Workers or from a state department of welfare.

CINCINNATI BOASTS HOSPITAL COUNCIL

Cincinnati has the distinction of being one of the few cities in this country in which superintendents of hospitals meet monthly as a hospital council. These sessions have been held for the past three years and have proved very helpful in solving the problems that confront executives of institutions for the care of the sick.

The council is composed of the Deaconess, Good Samaritan, City General, County Infirmary, Christ, Bethesda, Jewish, Children's and Seton hospitals.

Meetings are held monthly in the various hospitals in rotation, and occupy at least two hours' time. Minutes are kept and each session is conducted in a parliamentary manner. As a result of this cooperation, each superintendent feels at liberty to phone his colleague at any time and ask what might be deemed a "leading" question on policy or usage, and the answer is graciously given and without hesitation.

The hospital council is a source of great value to the patient as well as the doctor, because it furthers the development of better service in hospitals, and promotes an esprit de corps among those entrusted with the administration of these important institutions.

MR. GILMORE TO SOUTH AMERICA

Mr. E. S. Gilmore, superintendent, Wesley Memorial Hospital, Chicago, and president, American Hospital Association, has been chosen a delegate to go to South America next month for the international and interdenominational congress on Christian work.

INSTALLING DEEP THERAPY X-RAY EQUIPMENT

BY C. W. MUNGER, M.D., FORMER DIRECTOR, AND T. O. MENEES, M.D., RADIOLOGIST, BLODGETT MEMORIAL HOSPITAL, GRAND RAPIDS, MICH.

WHEN a trustee of Blodgett Memorial Hospital offered to fulfill a request for a complete deep therapy equipment, the hospital was immediately faced with the problem of its proper housing. A similar difficulty doubtless confronts many institutions. It is probable that an account of our experience in adapting the building to the apparatus and the apparatus to the building may be of value.

Blodgett Memorial Hospital is of the modern steel, concrete and brick construction which does not readily lend itself to changes, whether they be exterior or interior. The x-ray department was already busy, and was using all of its space with no apparent possibility of expansion. The accompanying floor plan gives an idea of the arrangement of the department. The only room that could possibly be spared was long and narrow, and had been designed for a dressing room. There being two dressing rooms, and the proportion of out-patients not being great, it was considered possible to get along with the small dressing room if we could adapt the larger room for deep therapy apparatus and treatments.

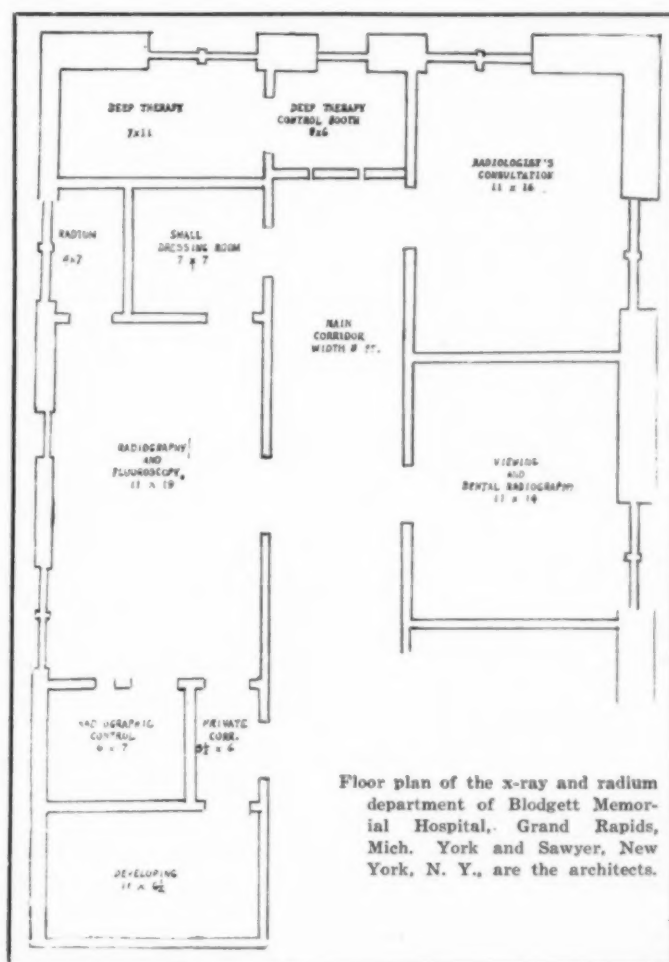
This larger dressing room was originally connected with the main x-ray room by means of a passage which was idle space ninety-five per cent of the time. It was therefore decided that as this small corridor would be unnecessary in connection with the deep therapy work, it could be closed off and used as a small room for handling radium and preparing radium applicators. It also contains an ionization chamber which is connected through the wall with the deep therapy room and provides for the careful standardiza-

tion of technique and the measurement of dosage.

It is, of course, impossible for the operator of the deep therapy machine to remain within the room where the treatment is taking place, unless he occupies a lead insulated booth. Our room was too small to accommodate any such booth. The small hall could not be used for that purpose as, being on an angle with the long axis of the room, it would not be possible for the operator to keep the patient constantly in view. The only

other adjoining space was the main corridor of the x-ray department. The illustration and floor plan will serve to show how a portion of the end of this corridor was adapted for use as an operator's booth. The full length glass doors, which separate this booth from the remainder of the corridor, admit enough light to prevent darkening of the corridor. The doors are hung on an overhead track and open wide so that the wheel stretcher can be turned in order easily to enter the door of the deep therapy room.

The close proximity of this deep therapy room to the remainder of the x-ray department, and also the fact



Floor plan of the x-ray and radium department of Blodgett Memorial Hospital, Grand Rapids, Mich. York and Sawyer, New York, N. Y., are the architects.

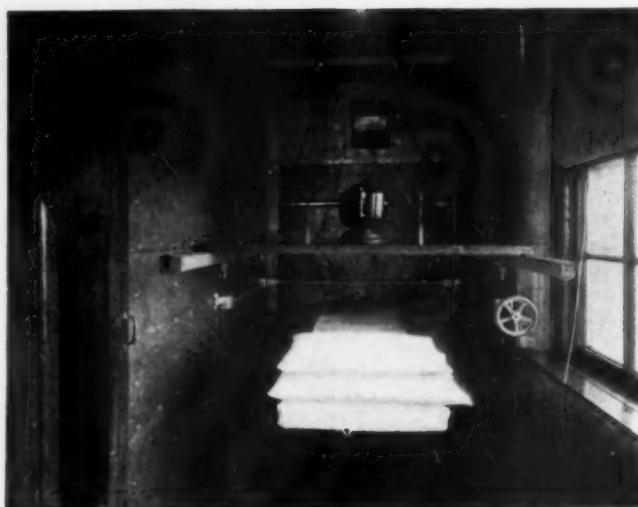
that the room is directly above a ward made it necessary to take special precautions regarding insulation. Sheet lead, one-fourth inch thick, was used. One-eighth inch lead has been advised by some writers, but it seemed worth while to incur the added expense, and be certain that the protection was adequate. The necessary lead weighed three tons, and architects and engineers were asked to approve the addition of this weight. As the hollow tile walls would not alone support the weight, the room was lined with two-inch boards fastened, by means of toggle bolts, into

the hollow tile. The lead was applied to these boards by means of special nails with lead heads, one-fourth inch in thickness. All joints between the sheets of lead were overlapped one and one-half inches.

The wall at the distal end of the table was completely insulated to the ceiling because the nurses' lodge and another wing of the hospital were within line of rays in that direction. An air vent, which was already on this wall, was also insulated with lead so that there could be no escape of rays by that route. This air vent was equipped with an electric fan of sufficient volume to exhaust the room completely within two minutes.

The left hand wall was insulated because of the proximity of the remainder of the x-ray department. The distal portion of the right hand wall was insulated on account of the possibility of rays escaping at an angle toward the nurses' lodge. The windows were left uncovered as they overlook a wide expanse of unoccupied hospital grounds, with a few houses more than a block away. The floor was insulated because of the patients in the ward beneath. As it was not desirable that the lead should be directly walked upon, it was covered by means of naturized rubber flooring. A special brass edging was attached to the lead and flooring at the threshold, to prevent the stretchers going over a "bump."

The door which had formerly been used for this room was not suitable for lead insulation, and neither were its hinges. An extra heavy, solid, panelled wood door, with thirty-two inch "barn door" hinges, was installed and insulated with one-fourth inch lead. A window, twenty-four by twelve inches, was cut in this door and was insulated by double thickness of lead glass. The ceiling of the room was not insulated as it is on the top floor with only an attic above. Dental



Deep therapy room.

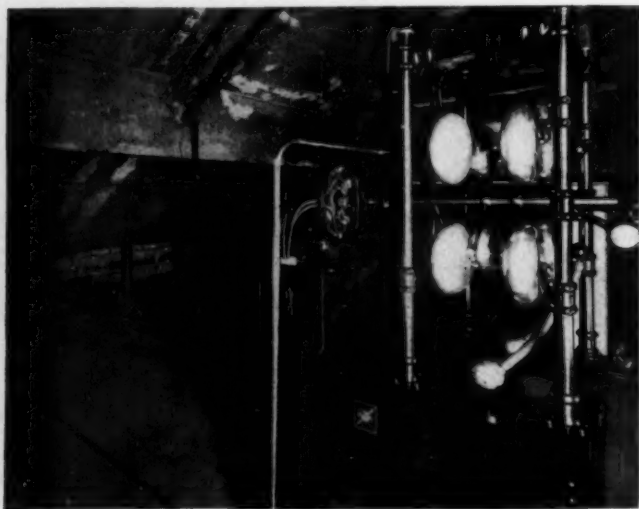
films placed in all parts of the department and on the floor below have been unaffected by hours of operation of the machine.

Construct Treatment Table

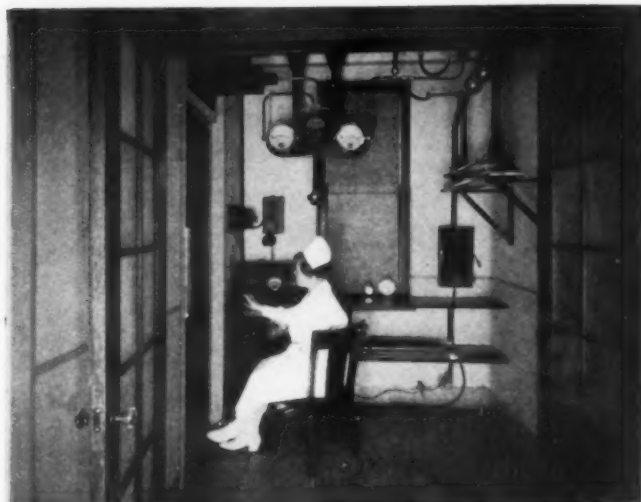
The room being unusually narrow it was impossible to use the ordinary wheel stretcher in bringing patients to the deep therapy table. We inspected numerous tables offered by x-ray companies but found nothing which suited our needs. We therefore constructed in our own carpenter shop the substantial table shown in the illustration. This table is equipped with smooth running wheels and a three-inch hair mattress and is regularly used in conveying patients who are not ambulatory from the wards to the x-ray department. It is wheeled into the proper position in the room and clamped into place by means of ordinary door stops, which have been attached at either end.

Since it was necessary to combine stretcher and table it was not practical to utilize a table with an oil pump for raising and lowering. By means of a simple device, therefore, we arranged our x-ray tube stand so that it could readily be raised and lowered and moved along the length of the table. This was accomplished by utilizing parts of a frame which is regularly manufactured for the purpose of raising and lowering heavy fracture patients. It has proved thoroughly practical and easily adjustable. The tube stand is raised and lowered by manipulating the small wheel shown at the right in the photograph. Titing of the tube can be arranged, if desired.

One of the photographs accompanying this article shows the arrangement and equipment of the control room. The ten-inch insulators were carried into the room through the transom and all aeriels, sphere gap, etc., were placed suffi-



Transformer placed in attic.



Interior of control booth.

ciently high to prevent danger to the operator from jumping of the current. Shelves are used for supplies needed in the work. The lead rubber necessary in protecting the patient by limiting the rays to a single area of his body, is kept on the lower shelf.

Transformer Installed in Attic

In most of the deep therapy departments which the writers have visited, the transformer was found on the same floor as the department, and in the same room, or in an adjoining one, was the treatment table. In every instance the noise was an undesirable factor. The operator of the machine may become accustomed to the noise, but to the nervous system of the patient it is often a serious disturbance. We are fortunate in that the x-ray department is on the top floor of the building, and that there is a high attic above. The transformer was installed in the attic directly over the control room. When the machine is running, the noise in the attic is great. In the x-ray department, however, only the faintest hum is perceived. We concluded that a transformer cabinet is undesirable. These transformers, whether or not encased in cabinets, must be carefully wiped off, almost daily. The machine, therefore, is more accessible for this purpose in the absence of a cabinet. The illustration depicts the transformer and connecting conduits.

This hospital generates its own electric current. There are two generators. The larger one is used for the heavy load during the day when elevators and various other motors are running. It is possible to operate the deep therapy transformer from this generator, but when several elevators and dumb waiters happen to be in use simultaneously there is rather serious fluctuation of the current. For this reason we have connected the



Table cart just outside of control booth.

deep therapy transformer directly with our small generator which, being used for the lighter load at night, ordinarily is idle during the day. This generator is therefore run during the day exclusively for the deep therapy machine, and we are able to obtain an absolutely steady current.

It requires about one and three-fourths tons of coal to operate the generator for six hours, which at the current price represents a cost to us of \$9.30. The complete cost to the hospital of this installation, in addition to the amount paid for the x-ray apparatus, was \$1,213.69.

The plan has worked to our entire satisfaction during the ten months the apparatus has been in use.

A. M. A. CONFERENCE ON HOSPITAL SERVICE TO BE HELD IN CHICAGO, MARCH 12

The annual session of the American Conference on Hospital Service which is held as a part of the annual congress on medical education, medical licensure and public health and hospitals of the American Medical Association will this year be held in Chicago, Ill., on Thursday morning, March 12, in the gold room, Congress Hotel. The entire conference will be held from March 9 to 12, 1925.

Dr. S. S. Goldwater, director, Mount Sinai Hospital, New York, N. Y., president of the conference, will preside over the meeting March 12. The following preliminary program has been prepared:

- (1) "The Extension of Hospital Privileges to all Practitioners of Medicine," by Dr. Goldwater.
- (2) "Advantages of the Closed Hospital," by Dr. Ralph B. Seem, superintendent, Albert Merritt Billings Hospital, Chicago, Ill.
- (3) "Advantages of the Open Hospital," by Dr. M. T. MacEachern, American College of Surgeons, director, hospital activities, Chicago, Ill.
- (4) "The Distribution of Physicians in Relation to the Hospital," by Mr. Homer F. Sanger, Council on Medical Education, Chicago, Ill.
- (5) Annual report of the progress of the Hospital Library and Service Bureau, by Miss Donelda R. Hamlin, Chicago, Ill., director.

OPPORTUNITY FOR MEDICAL EDUCATION THROUGH GRADUATE TEACHING*

By JOHN E. JENNINGS, M.D., ATTENDING SURGEON, BROOKLYN HOSPITAL, BROOKLYN, N. Y.

THERE is a story told, I think, of Willard Parker and of how, at the close of an oral examination which in those days was held to determine the fitness of candidates to practice, he shook hands with a successful student, congratulated him and asked him what he proposed to do. "Well," said the youngster, "I think I'll start practice, now that I've finished my education." "My boy," said Parker, "again I congratulate you, my own is hardly begun."

I have repeated this elderly story, which has now quite lost its point, to illustrate how the profession has advanced in a generation. Certainly it is not now the youngsters who feel their training complete and, indeed, all over the country, from old and young alike, the call for more opportunity for self-improvement is heard in no uncertain terms. Our great post-graduate schools; the intensive work being done in our medical colleges and in our teaching hospitals; the annual meeting of our many professional societies and the constantly growing practice of visiting fellow physicians; the many operative and diagnostic clinics held in our great hospitals all serve to fan and, to some extent, feed the flame.

Responsibilities of the Profession

Less perhaps a learned profession but more a learning one, medicine begins to become self-conscious and is turning to face the great social responsibilities it must before long assume. What these may prove to be we cannot discuss here but among them and certainly not the least is the constructive reorganization of the care of the sick in such a way that the advantages of cooperation

may be gained with no loss in the human interest which made, makes and must always make the physician's true reward.

It is upon the solution of this problem that all of us who work in hospitals are essentially engaged and it is in proportion, as our institutions are able to cooperate with the physicians and patients, that we may measure our success.

The Dispensary As a School

"LESS perhaps a learned profession but more a learning one, medicine begins to become self-conscious and is turning to face the great social responsibilities it must before long assume.

Not the least responsibility is the constructive reorganization of the care of the sick in such a way that the advantages of cooperation may be gained with no loss in the human interest which made, makes and must always make the physician's true reward."

"The intern course instructs the young practitioner in many most important branches but not in diagnosis and treatment of ambulatory patients. . . In the dispensary is his opportunity, and upon what he is able to learn and apply there depends, in great measure, the success of his career."

The modern hospital is a thing undergoing rapid evolution—a process, we must remember, of differentiation, and while so-called standardization is of value so long as it is made to serve a definite purpose, it may become an absolute bar to progress if it is made an end in itself.

Any plan, no matter how well it may have been found to work in one locality, must be thought of only as a sample of experience to be changed, modified, perhaps even reversed, in another, but the opportunity for the hospital to assume its proper place as an institution of learning as distinguished from a teaching institution be-

comes more insistent every day. As it is most neglected in this respect, most imperative is the opportunity, the duty of the O. P. D. to assume its proper place.

Medical education is undergoing a process of adjustment.

Not so very long ago the physician was himself responsible for the education of his successors. When his practice, his age and his prestige allowed, he selected a likely youth, perhaps the apothecary's son, who became his helper, did the office chores, took an interest in the horse, kept his books, went with him on his rounds and read medicine in his spare time. He talked to him, inspired him, and he showed him how. In time

*Presented before the out-patient section of the Buffalo Conference of the American Hospital Association, October 6, 1924.

he let him try his hand and bye and bye turned him out to go on his own.

How scant his knowledge was we know. It used to be the fashion to deride him. We miss, in some measure, his homely wisdom now. Our medical schools and hospitals have taken his place as preceptor and have replaced his slender information with a mighty mass of science, so much in fact that the student cannot be trained as he would like to be and as he ought to be in the four years of his college course. He must go on. His intern course instructs him in many most important branches but not in diagnosis or treatment of ambulatory patients, the proportion of which to bed patients is about 10 to 1.

Where can he learn from an older man how these things are done?

The Place to Study Ambulatory Patients

In the dispensary is his opportunity and upon what he is able to learn and apply there depends, in great measure, the success of his career.

His tendency is often to specialize at once, to find an opening in some regional clinic and remain there, at first with enthusiasm then with interest, then as routine claims him, with dogged resolution, hoping for promotion to the hospital staff.

Meanwhile, outside, are men unattached to any dispensary staff, who miss and would gladly avail themselves of an opportunity to work in the dispensaries if it were offered to them.

I am satisfied that if definite graded courses of service in out-patient departments were given so that in a year or two a graduate student could go the rounds of the more important clinics and obtain a diploma or even a degree, the opportunity would be welcomed and if, in the special clinics, definite terms of apprenticeship, fortified by proper theoretical instruction and recognition at the conclusion of the courses were established, would not the reality of specialism be made more secure?

The physician who wishes to undertake post-graduate study finds it necessary, in most cases, to stop practice and devote time to his study. He has to leave home, leave practice and spend considerable time and money in an intensive course in the subject he wishes to pursue. In many cases he can get what he wants by this sacrifice, but in many more he obtains a mere smattering, since he devotes but weeks to a subject to which years should be given.

The post-graduate schools serve a great and useful purpose and deserve all praise but there already exist in our great cities half developed, uncoordinated, one may even say, unconscious

graduate schools doing most of the work of training our specialists in medicine and surgery.

How great a part of this training is done in the out-patient departments of our hospitals and at what a loss of time and effort!

What a splendid field for the diligent and earnest student who knows how to make the most of his opportunity and what discouragement for the routinist, stupified by drudgery and uninspired by an earnest chief!

Stated Service Terms for O. P. Department

Is it not possible to plan an out-patient department in which stated terms of service are arranged, in which men are admitted upon establishing their fitness, in which suitable theoretical instruction is given supplementing the practical training of the clinics themselves and in which proper examination, at the close of the period, tests the candidate for a proper certificate? Such courses could be arranged so as to be suitable for the general practitioner who would spend short terms in many departments or for the would-be specialist who would spend long terms of graded service in one department.

It is not inconceivable that cooperation between hospitals might be established and that a candidate might very well take part of his course in one institution and part in another.

The active cooperation of a medical college which would offer theoretical instruction as an integral part of the courses would be almost essential and as an integrating factor the activity of a county medical society, or an association of hospitals, would seem ideal.

Such a development calls for a highly organized out-patient department for enthusiasm and willing service on the part of the attending staff and for a wide and unselfish vision on the part of the organizers. Would the profession respond to such an opportunity?

The experiment in graduate education undertaken by the joint committee of the Medical Society of the County of Kings and the Long Island Hospital medical school with the cooperation of the department of public welfare and its hospitals in Brooklyn, the Jewish Hospital, the Israel Zion Hospital, the Wyckoff Heights Hospital, St. Catherine's and others, seems to show that in Brooklyn at least the germ of such an enterprise is welcome.

This committee has arranged for many extensions and a number of intensive courses in a wide range of subjects in medicine and surgery, and the reception given by the profession has been encouraging. The movement, I believe, is still in its infancy and many changes and adjustments

may be necessary, but the spirit is alive. The correct method can be worked out and the possibilities of development are very large.

There is another side of the development of the educational duty of the dispensary which should not be ignored. It may seem that the relation of social service work to graduate education is remote but in fact the observation of an active social service department at work is an education in itself. There the graduate student will see how much can be taught the patient in the venereal disease clinic, in the tuberculosis clinic, in the cardiac and the pediatric clinics. He will see how the principles of individual preventive medicine should be taught. He will see the mass of our population being reached directly, for the instruction so given reaches not only the patient himself but the family and the neighbors as well.

He will see the live department that is doing its full duty training workers in its methods and inspiring them with its ideals and his vision will widen until he cannot but recognize the part preventive and social medicine is just beginning to play and how great a role it will surely assume in the medicine of the future. He will learn too, as he touches elbows with his fellow learners, how boundless is the field for curative medicine and how easily the demon of state medicine can be allayed by the spell of humanity and skill.

DR. BACHMEYER MADE DEAN OF MEDICAL COLLEGE OF UNIVERSITY OF CINCINNATI

Dr. A. C. Bachmeyer, superintendent, Cincinnati General Hospital, Cincinnati, Ohio, and president-elect of the American Hospital Association, has been chosen dean of the medical college of the University of Cincinnati. The appointment was made at a special meeting of the board of trustees of the University of Cincinnati, December 23, 1924, and will become effective September 1, 1925. He will succeed Dr. Henry Page. Dr. Bachmeyer is a native of Cincinnati, and has been identified with the university for the past several years. He is acting dean now.

GREATER STUDY OF CHRONIC DISEASES NEEDED

Measures should be taken to ascertain the number of beds for chronic patients that are needed per unit of population. These should be further subclassified in the different categories that have been discussed. The adaptation of the physical plan of the buildings to the several types of patients should be thought out. An analysis of the necessary medical services and equipment demanded by the different types of patients must be made. For instance, the great importance of physiotherapy will bear emphasis. The nursing, dietetic, social service, laboratory and occupational therapy services will have to be studied in relation to the needs of the different groups of patients.

The importance of a properly conducted hospital for chronic diseases in the education of physicians and nurses cannot be overestimated. These diseases form the bulk of the ailments to which humankind is heir, and they have not as yet received the intensive study which they merit. Similarly, the opportunities for the clinical and

laboratory investigation of chronic diseases in such an institution are unlimited. At present most of this valuable material is going to waste, instead of being used in an endeavor to increase our knowledge of disease that its end results—the chronic patient—may no longer be a community burden. The care and disposition of the chronic patient and the scientific study of chronic diseases are among the most important community and medical problems of the present generation.—*Chronic Diseases*, by Ernst P. Boas, M.D., and W. H. Livingston, M.D.

ACADEMY OF MEDICINE ASKS HOSPITAL ASSISTANCE

The public health committee, New York Academy of Medicine, has sent the following letter to the presidents of the board of trustees of hospitals:

In view of the fact that the origin of the present outbreak of typhoid fever in the city has not as yet been definitely ascertained, the public health committee of the New York Academy of Medicine urges the hospital to assist the department of health in its efforts to trace the source of the infection by furnishing as completely and early as possible, all the data and clues which may be obtained from the histories of typhoid fever patients.

HOSPITAL AND HOMES ASSOCIATION TO MEET FEBRUARY 18-19

The seventh annual meeting of the National Methodist Hospitals and Homes Association will be held February 18-19, at the auditorium of the Methodist Book Concern, Chicago. The following tentative program has been arranged:

Wednesday Morning, February 18th

- 10:00 Devotions, led by the Rev. Gilbert H. Newland, pastor, Grace Methodist Church, Chicago, Ill.
- 10:15 President's address, Dr. C. S. Woods, St. Lukes Hospital, Cleveland, O.
- 10:30 Review of the year and secretary's report, Dr. W. H. Jordan, Asbury Hospital, Minneapolis, Minn.
- 10:45 "Place and Importance of Hospitals in the Program of the Church," by Bishop T. S. Henderson, Cincinnati, Ohio; followed by discussion.
- 11:30 "Pastor's View of the Service of Hospitals," The Rev. Frank Neff, D.D., pastor of Washington Ave. Church, Kansas City, Mo.; followed by discussion, and luncheon at 12:15.

Wednesday Afternoon, February 18th

- 2:00 Devotions.
- 2:15 "Growth and Development of Homes for the Aged," by the Rev. U. S. Brown, D.D., Methodist Home for Aged, Topeka, Kan.; followed by discussion.
- 2:50 "Children's Homes and Their Relation to the Church," by Dr. S. W. Robinson, Methodist Home for Children, Williamsville, N. Y.
- 3:10 "A Study of Children After They Leave the Home," by Miss Lucy J. Judson, Deaconess Children's Home, Lake Bluff, Ill.; followed by discussion.
- 3:45 "Need and Development of Hospitals for the Colored Race," by Dr. J. J. Mullaney, Meharry Medical College, Nashville, Tenn.
- 4:15 Group meetings; Hospitals; Homes for Aged; Homes for Children.
- 6:00 Association Dinner.

Wednesday Evening, February 18th

- 7:30 "What the American College of Surgeons Expects of the Small Hospital," by Dr. M. T. MacEachern, American College of Surgeons, (hospital activities), Chicago, Ill.
- "Place and Development of Homes in the Progress of the Church," Bishop Edwin H. Hughes, Chicago, Ill.
- 9:30 Devotions.

Thursday Morning, February 19th

- 9:45 "The New Board of Hospitals, Homes, and Deaconess Work," by Dr. N. E. Davis, corresponding secretary, Chicago, Ill.
- 10:15 "Raising Funds for Philanthropic Institutions," by Dr. C. E. Wakefield, Flower Hospital, Toledo, Ohio; followed by discussion.
- 10:50 "Pensions for Hospital Workers," by Miss Mae Middleton, Methodist Episcopal Hospital, Philadelphia, Pa.
- 11:30 "Encouragement of Research in the Hospital," by Dr. Charles H. Young, Portland, Me.; followed by discussion.
- 12:15 Luncheon.

Thursday Afternoon, February 19th

- 2:00 Devotions.
- 2:15 Round Table. (This is a free discussion of any matters of interest that any member may wish to bring up.) The following are some suggested topics: Social service in Methodist hospitals and homes; The average age of persons who enter homes for the aged, length of time of residence; the student nurse and the problems of her development; cost of student nurse to the hospital.

THE MITHOEFER EYE, EAR, NOSE, AND THROAT HOSPITAL, CINCINNATI, OHIO

WITH respect to location, completeness and arrangement, the Mithoefer Hospital, in Cincinnati, exclusively for eye, ear, nose and throat cases and nasal plastic surgery, is probably the only institution of its kind. The hospital was opened a short time ago by Dr. William H. Mithoefer for his private practice. Associated with him are Drs. A. J. Beyer, William Topmoeller and Frank Conroy.

The hospital is unique in that it is located on the top floors of a large modern office building, in the heart of the business section of the city. This is known as the doctors' building, as it is occupied exclusively by members of the medical profession. As may be seen from an accompanying illustration, the building is a handsome Gothic structure, eight stories high. It has a frontage of about 175 feet on the south side of Garfield Place, a broad thoroughfare, and is in the middle of the block between Race and Vine streets overlooking Garfield Place.

The hospital occupies all of the eighth floor, one-fourth of the seventh floor and part of the roof, on which there is a solarium. The accompanying plan shows the general arrangement of the various departments and sections, and accompanying illustrations give an idea of the appearance of many portions of the interior. It will be noted that each unit is compact, and arranged with a view to the elimination of lost motion and unnecessary effort. The walls of the rooms and wards are tinted a warm, light-gray tone, as high as picture molding, and above this and on the ceilings the tint is a light cream color. The floors are covered with materials which are suited to the individual requirements; in some cases it is linotype, in others, battleship linoleum.

Upon entering, the doctors' building the patient ascends one of the several elevators to the eighth floor where he approaches a large receiving room. The registrar seated at a desk in the center of the room enters his name. In the case of patients who return for treatment a card is

made out for the doctor who is to give the treatment, and the daily treatment card is pulled from the file and placed in a rack at the entrance to the treatment section. An usher seats the patient in one of the waiting rooms, and later another usher takes the patient to the treatment room. Cards are dropped through door-slots to indicate that patients are waiting, and signals notify the ushers when patients leave, at which time others are conducted in for treatment. There are twelve of these treatment rooms in the east wing of the building.

Patients who are to occupy a room or to be placed in a ward are recorded in the usual way and an usher conducts them to a nurse. Visitors and those who call on business matters are conducted to a small reception room, which adjoins the receiving room. Next to this is the private office of the superintendent of the hospital, Miss Winifred Culbertson, a graduate nurse who has had broad experience in

cases of the nature that are handled. She assisted the architect in making the plans, attended to the purchasing of all the equipment, and superintended its installation.

Next to Miss Culbertson's office is the general business office, and adjoining this is the office of the stenographer, in which there is a telephone switchboard, with outside connections and an intercommunicating system reaching all departments. Adjoining this room is the office of the financial secretary. All four rooms are connected by doorways, and there are also doorways which lead to the receiving room or corridor. The general office is separated from the reception room by a long counter. On a broad corridor which extends eastward from the receiving room are two large reception rooms, with handsome Gothic furnishings, in keeping with the note of the attractive exterior of the building.

Twelve Treatment Rooms

At the end of this corridor is a doorway, which leads to a transverse corridor, extending north



Front of building housing the new Mithoefer Eye, Ear, Nose, and Throat Hospital.

and south. Opening on this passage and another which branches from its south end are twelve treatment rooms. The first of these, at the northeast corner of the building, is Dr. Mithoefer's private office and treatment room, and on the southeast corner is a similar office and treatment room. Between these two rooms are six other treatment rooms, all facing the east, and these are arranged in groups, with doorways between—an arrangement which enables a doctor to have two or more patients at one time.

Each of these eight treatment rooms is similarly equipped, and complete, so that there is no need for carrying instruments from one room to another. The only dissimilarity in the equipment of the eight rooms is the desks and chairs in two of the rooms and the other equipment in each is as follows: one Wilkinson treatment table, with necessary instruments, sprays and power blowers; one Cincinnati chair, one enameled chair and one extra chair; Sorenson's suction apparatus; Clark fountain cuspidor; small table for basins; container for soiled towels; inflation sets; and stationary washstand. As direct current is served in this district, alternating current is generated by a converter in the basement. Compressed air and electric leads are conveniently located.

Special Testing Rooms

The second room on the south of the building is a large one in which the testing of eyes is done, and next to this is a smaller room for eye treatment. On the opposite side of the hallway is a vestibular room, and next to this is a plastic surgery treatment room, for nasal cases. The ear-testing room, twenty feet long, provided for functional hearing tests, has its walls, ceiling and floor completely deadened and is absolutely sound-proof. In another room there is a 2-A audiometer. There is also a room for metabolism tests.

Next to this is the sterilizing room, which is equipped with an instrument sterilizer, water sterilizer, instrument cases. In this room all of the sterilization of instruments used in the various treatment rooms, is taken care of so that the sterilizer is eliminated from the doctors' tables. High-pressure steam comes to this depart-

ment, as well as to other departments where it is needed, from a special boiler located in the basement.

For the use of patients who cannot leave immediately after treatment there are comfortable rest rooms.

In this wing is also the office of the internist, who takes charge of cases for diagnosis only. Opening from the receiving room is the central record room where all histories are filed both for the office and for the hospital.

Features of the Hospital Section

Leaving the receiving room the hospital section is approached from a corridor which extends to the west. This section accommodates thirty patients. This is a compact unit, complete in every detail, and arranged so as to eliminate

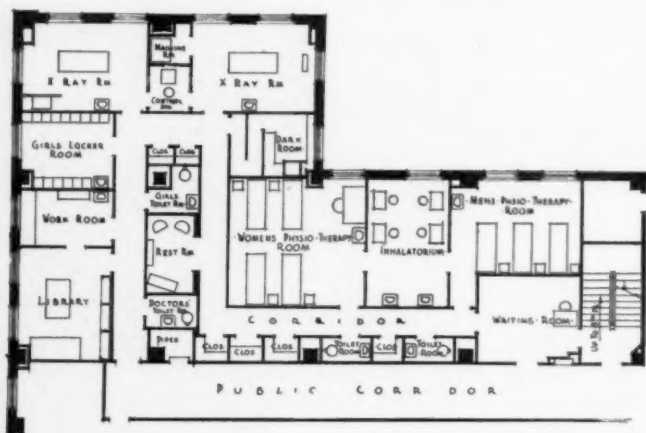
waste effort. All of the rooms and wards have walls of light gray and ceilings of cream color, both soft tints, so as not to cause any reflection. The woodwork and doors are of mahogany and the furniture is walnut in the rooms and wards for adults. In the children's ward the furnishings are light in color.

To the north, overlooking Garfield Place,

are two wards for men, one with three beds and the other with two. A small hall connects these rooms with the bathroom and toilets, shutting them off from the main corridor. Next to these are two wards for women, similar in size and arrangement to the wards for men. Each patient in the wards and rooms has a bedside stand and thermos bottle. The Bryant signal system is used throughout.

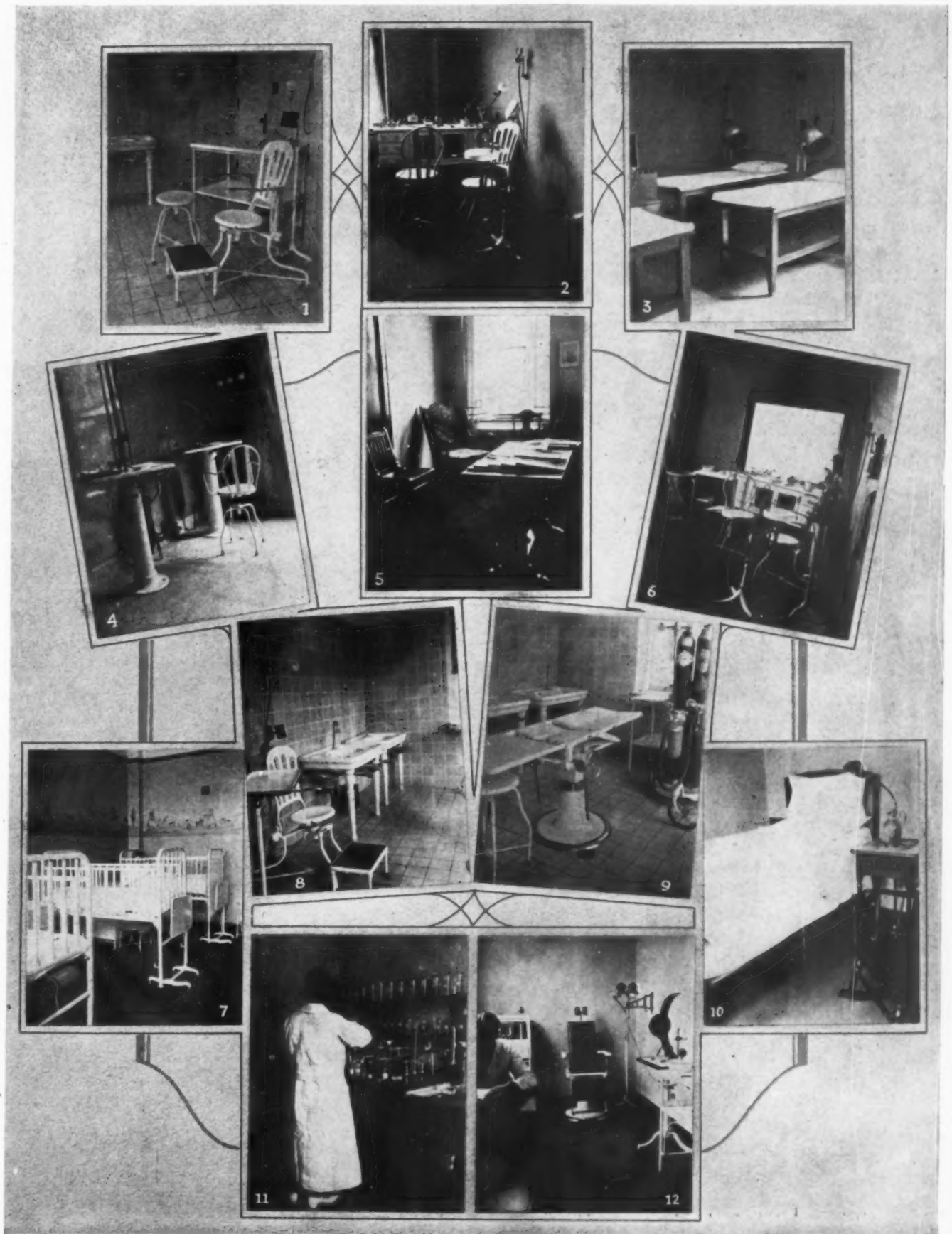
At the northwest corner is a single room, and beyond it are five more single rooms which face the west. Some of the single rooms have a private bath, and all that do not have a bath have a lavatory and a toilet. There is also a general bathroom, shower and toilet at the end of the main corridor. On the north side of the corridor, convenient to wards and rooms, are commodious closets for the storage of linen, blankets and other articles.

The kitchen is complete in every detail, with ample facilities at the command of the dietitian who is in charge. This is located on the south side of the main corridor and has windows over-



Plan of seventh floor.

GLIMPSES OF MITHOEFER EYE, EAR, NOSE AND THROAT HOSPITAL



(1) Corner of west operating room; (2) view of Dr. Mithoefer's private treatment room and office; (3) section of light treatment room; (4) view of inhalatorium; (5) east reception room; (6) one of the treatment rooms; (7) corner of children's ward; (8) washstand and chair in east operating room; (9) view of east operating room showing details of table; (10) view of private room; (11) corner of laboratory; (12) eye room.

looking the south. Next to it is a dining room, for use of doctors and nurses. All nurses are graduates, and all live on the outside, as there are no rooms for them in the hospital. This increase in their cost of living is equalized by the compensation they receive.

The next section, the children's ward, is an unusually attractive one, as may be seen from an accompanying illustration. It contains four beds, has juvenile chairs and decorations, which, together with its southern exposure, make the room very cheerful. Adjoining this is a service room, which contains a sterilizer for bedpans, racks for dressings, and other usual equipment.

As group nursing is the system used each nurse has a stated number of patients, all of whom receive such excellent care that very seldom is it necessary to employ a special nurse. The entire arrangement of the hospital is ideal, with all departments under one management and without overlapping of duties. As a medical unit it is very unique, and is regarded as an ideal way for the specialist to conduct his practice.

In the southwest corner of the hospital section is located the operating suit, which consists of two operating rooms, with a sterilizing room between them, a workroom for nurses, and a rest room, shower, toilet and lockers for the use of the surgeons. Both operating rooms are sound-proof, and each is prepared to take care of both local and general cases.

Special Departments

The physiotherapy and x-ray department occupies the southeast quarter of the seventh floor, and this may be reached either by a private stairway which leads from the reception room above or by the elevators. The entrances on the

seventh floor may be used by patients who do not need to go to departments above. On the south side are two x-ray rooms, with machine room and control room between, and with a darkroom adjoining. On the east are located a library, a work room for the doctors and a locker room for the office assistants.

Facing the south is a physiotherapy room for men, with three couches. In this section there are the latest appliances used in light and heat therapy and diathermy. At the end of the suite, with an entrance to the hallway, is a waiting room, with a desk for the attendant.

PRESBYTERIAN HOSPITAL, PHILADELPHIA, HOLDS ANNUAL MEETING

The annual meeting of the corporation of the Presbyterian Hospital in Philadelphia was held on January 20, and the following ten persons were elected trustees to serve for terms of three years:

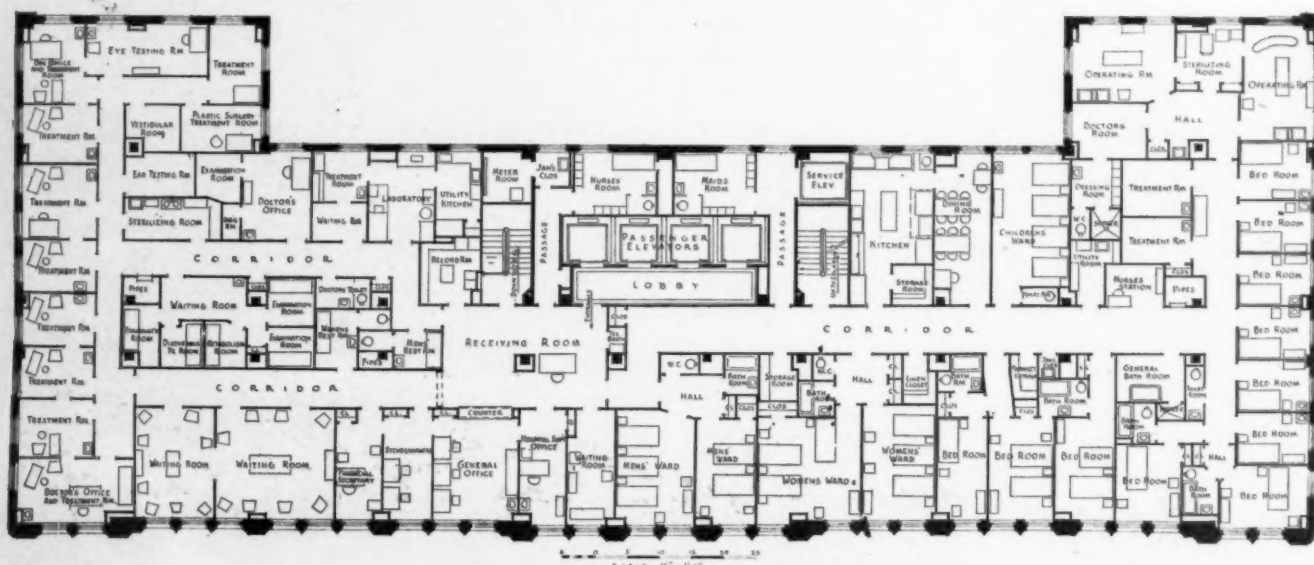
Craig N. Liggett, George Stevenson, J. Claude Bedford, J. Renwick Hogg, Rev. H. Alford Boggs, D.D., Mrs. Frank C. Roberts, Mrs. Barclay H. Warburton, Charles J. Swain, Frank T. Gucker, William G. Littleton.

During the year ending December 31, 1924, 1,081 ward patients received, 38,400 days' free treatment, which is an average of 105 persons receiving free treatment each day of the year. Twenty-seven and three-tenths per cent of all the patients admitted to the hospital received free treatment. There were 63,460 days' total treatment of ward patients, 60 and five-tenths per cent of which was free service.

An average of nineteen persons received treatment in the emergency ward every twenty-four hours (school children; industrial; street; automobile and other accidents).

Each week day, an average of 116 persons were treated in the dispensary.

Some people enjoy being martyrs. They love to tell about the terrible strain they have been under, the amount of work they have done, or the number of times they have collapsed.—*Jackson*.



Eighth floor, Mithoefer Eye, Ear, Nose and Throat Hospital.

ST. LUKE'S HOSPITAL (CHICAGO) ADDS NINETEEN STORY ADDITION*

By JOSEPH J. WEBER, M.A., EDITOR, THE MODERN HOSPITAL, CHICAGO, ILL.

NOT because St. Luke's Hospital of Chicago cares to take pride in the fact that it has one of the tallest, if not the tallest, hospital building in the United States, but because a painstaking analysis of the whole problem indicated that it was wiser in many ways to build an extensive addition on its present property than to build an entirely new institution elsewhere, its trustees decided to add a nineteen story structure to the present plant, consisting of the Smith, Kirkwood, Stickney and Johnston buildings which together have a total capacity of 420 beds.

Site Overlooks Lake Michigan

The long axis of the new building extends north and south and is 200 by fifty-eight feet. The east side of the building parallels the building line of Indiana Avenue. The remaining buildings of the hospital, none of them over six stories in height, lie to the west and north. The main entrance of the hospital as a whole is located on Michigan Boulevard, one of Chicago's principal thoroughfares. To the east of the new building lies a network of tracks of the Illinois Central Railroad; many of these, however, are shortly to be discarded. The road itself will be electrified in a year or so, thereby eliminating all of the dirt and much of the noise of the present system. Farther to the east, the city of Chicago is building its magnificent new stadium, while to the northeast is the stately Field Museum. Nothing will interrupt the inspiring view of the broad stretches of Lake Michigan over these classic structures.

The new pavilion is designed for the care of indigent patients and patients of moderate means, as well as to provide the hospital with adequate laboratory facilities for routine work and a suitable amount of research together with additional teaching facilities for its school of nursing.

The new structure will add 679 additional beds to the hospital. For the present, however, and until a new nurses' home can be built the third, fourth and fifth floors will be used to house pupil nurses, leaving 550 beds for the care and treatment of patients.

Basement Corridors Connect Buildings

Connection with the other structures in the group will be by means of basement corridors,

and a bridge which leads from the main floor of the old building to the second floor of the new structure. The new pavilion will have its own power, heat and refrigerating plant. It will be served by a central laundry and also by a main kitchen. This kitchen is centrally located to the main buildings in the group and is six yards from the dumb waiters which will carry the food containers to the various kitchens. The running time of these dumb waiters from the basement to the nineteenth floor is thirty seconds.

In addition to two sterilizing rooms, one for mattresses, the basement (which is well lighted with wide areas) contains extensive space for record and film storage, shops for the manufacture of artificial limbs and braces, retiring rooms for men and women employees and a physiotherapy department completely equipped with all physiotherapy apparatus, including Zander apparatus, a baker, a light cabinet, high pressure hot and cold water and leg and arm baths. The department also includes receiving wards.

A number of rooms in this basement will have white tile floors and enameled brick walls which will further tend to make them bright and cheerful.

Just back of the reception room, at the center of the main floor, is the general office, flanked on the south by the offices of the social service department and on the north by a room for the registrar of histories. Besides the bank of three main elevators, the northern half of the main floor contains an accident ward and an examination room with an adjoining compartment for the ambulance, a room for the medical staff, offices for the matron and the purchasing agent, toilet rooms for the general public and a room for general supplies.

The southern half of the floor will be devoted to the hospital's follow-up work and contains, in addition to the social service offices already mentioned, a spacious waiting room, a plaster room, a laboratory and five clinic rooms.

Second Floor for School of Nursing

The second floor has been permanently assigned to the hospital's school of nursing. It contains the large assembly and lecture room, with a seating capacity of 400, a small lecture room with a capacity of eighty pupils, a demonstration room, a library, a laboratory, a large living room and the offices of the head of the training school and her assistants.

*Some of the floor plans which were not available at the time of publication, will be published in a later issue of the magazine.

Until the hospital builds a new nurses' home, the third, fourth and fifth floors, all similar in plan, have been temporarily set aside as living quarters for about 130 student nurses.

Provision for People of Moderate Means

The sixth and seventh floors contain small single and double private rooms. These rooms, which will accommodate a total of sixty-four patients, are intended for people of moderate means. At the outset a charge of \$5 a day will be made for these rooms. This price, however, is only tentative, pending the establishment of definite cost figures. Eventually it may be possible to make the charge somewhat less. On the other hand, it may be necessary to charge slightly more.

The service rooms of this and other floors devoted to the care of patients are located on the west side of the ambulatory building. They include a dining room for ambulatory patients, a small serving kitchen with two dumbwaiters connecting with basement, toilet rooms, linen dressing and sink rooms, interns' laboratory, nurses' lavatory and a room for odds and ends of apparatus.

The northeast corner of each of these floors contains a group of four small rooms arranged around a common sub-corridor. Three of these may be used for the isolation of patients for one reason or another. The fourth, an internal room, is for the storage of patients' clothing.

Eighth Floor for Children

The eighth floor is devoted to the care and treatment of children. It will accommodate seventy patients. While the rooms and wards of this floor, like those on other floors, have terrazzo flooring, rooms such as the dining and play room and the solarium at the south end of the building where the children are likely to play on the floor, will have rubber tile floors. To prevent any child from falling out of a window nearly all of the

lower sashes of the windows on this floor are equipped with specially designed extensions or bars, which take the place of a part or all of the lower sash when it is raised. This scheme has the merit of obviating permanent barred windows on this floor.

A section of the north half of this floor is reserved for isolation purposes and is segregated from the rest of the floor by two-way, double corridor doors.



Front view of the new addition to St. Luke's Hospital, Chicago, Ill.

The ninth floor has been assigned to obstetrical work. The labor rooms located just across from the patients' elevator are soundproof. There are two delivery rooms, with a sterilizing room between them. There are also two rooms for patients awaiting labor. Separate nurseries are provided for black and white babies.

The tenth floor is devoted to eye, ear, nose, throat and dental work.

The eleventh to seventeenth floor are typical patient floors. The service rooms are all on the west side of the building, the patients' rooms and wards on the east. These rooms consist of open air ward, one large ward

which will accommodate fifteen patients, four small wards accommodating five patients, two double rooms and two isolation rooms. The twelfth or women's medical floor will have a medical clinic.

Laboratory Department on Eighteenth Floor

One of the most interesting floors of this building is the eighteenth or laboratory floor. Across the corridor from the main elevators is a waiting room, with doors leading to the metabolism and cardiograph suites. The former consists of a metabolism room and two rest rooms; the latter, of a cardiograph room and offices, a dark room and a closet. The cardiograph is wired over the entire house.

To the right as the visitor walks down the corridor he passes, in turn, rooms for blood analysis, urinalysis, routine bacteriology, toilet,

media and preparation, pathology, and five rooms for research. On the opposite side of the corridor, as one walks south, are the library, a room for photography, two rooms for chemistry, the director's office, a workroom and rooms for Wasserman, serology, bacteriology and research. Beyond the stairway at the south end, in the space devoted to the open wards on other floors, are the small animal room and an animal operating room. Adjoining the room for pathology is a small office for the stenographer. This floor is, of course, equipped with ordinary hot and cold water, filtered and sterilized water, electricity, gas, vacuum and compressed air.

The nineteenth floor contains a clinical amphitheatre, three large operating rooms, a doctors' room, a plaster clinic and the x-ray suite. The transformers are installed in the attic which will also house the large animal room.

Pavilion Planned to Conserve Energy

In the planning of this pavilion every effort was made to economize time and effort. The services have been so planned as to confine the efforts of the medical and nursing staff to one or, at most, two floors. A system of pneumatic tubes has been installed for the inter-departmental transfer of records, orders, specimens and other small items. There is an automatic, high-speed dumb-waiter from the drug room to the various floors. This dumb-waiter has a speed of 450 feet a minute. There is also a fast dumb-waiter connecting the laboratory with the various floors. A button elevator for the doctors, nurses and messengers can make all nineteen floors, with a momentary stop at each floor, in four minutes. The pavilion will be served with a central postoffice having a chute to all floors. Inter-departmental notes can be dropped in the postoffice chute and the postoffice will transmit them immediately either by pneumatic tube or messenger.

The pavilion is served by three main vestibuled elevators situated at the north end of the building. The northernmost of these three elevators is partitioned off from the other two and is reserved for stretcher cases. These elevators will travel 750 feet per minute or twenty seconds from street level to the top. They have automatic doors, are jar-proof and start at a given rate of speed, irrespective of the operator. Moreover, they will automatically adjust themselves to any floor level if stopped within eighteen inches above or below the floor. At each end of the building are fireproof enclosed stairways. The pavilion is equipped with an automatic call system having flash and tap signals. The tap signals are planted close to each other so as not to require

a very loud tap. A central recorder will serve as a check on the promptness with which calls are answered.

A linen chute with an opening in the sink room of each floor will carry soiled linen to a distributing point in the central laundry, conveniently near to the washers. Because of its unusual length this chute will be kept clean by a spiral flush installed at every third floor. A similar chute at the southern end of the building will take care of miscellaneous waste.

Minimum of Metal Requiring Polishing

Little time and effort will be spent in the polishing of metal, as the faucets in the lavatory and a small amount of metal on operating room equipment will be the only surfaces requiring polish. All other metal will be painted with a special preparation which is not affected by ether, alcohol or the alkalis. The bathtubs and water closets are provided with china handles. All door knobs will be of glass.

Believing that bathtubs will, in the not distant future, be almost wholly eliminated from hospitals, those who are responsible for planning this building have placed a shower bath, in addition to tubs, on every floor except on the maternity floor. One of the tubs on each floor stands on a twelve inch elevator to admit of the easier examination of patients if and when necessary.

To get at the plumbing fixtures readily, so-called utility corridors are provided on each floor adjacent to the plumbing installations. Whenever partitions are not fixed by major pipe lines or by ventilating ducts, they may be moved without undue effort, thus giving the arrangement of each floor a marked flexibility.

The rooms throughout the pavilion are wired for radio and are connected with a central radio set located in the telephone switchboard room. No wood or other combustible material is used in the construction of the building, and in equipping it, very little wood furniture will be used.

All the corridors are plastered to a height of forty-two inches with Portland cement and a Keene cement surface. This gives a surface that will stand up under the hardest usage; moreover, the steel door jambs are carried back to give added protection.

An unusually complete and effective ventilating system has been installed which, because of the height of the building, consists of several units. An intake unit supplies the basement, the first and the second floors with suitably heated and washed air. An exhaust unit in the basement draws off the foul air from the basement and the first six floors. On the sixth floor there is an

intake unit which supplies air for the third to the seventeenth floor. An exhaust unit in the attic draws off the air from the seventh to the seventeenth floors. Still another unit takes care of the incoming and outgoing air for the eighteenth and nineteenth floors, that is, the laboratory and the operating room floors.

The system is so arranged that the air is forced into the patients' rooms on the east side of the building and exhausted through the bath, toilet and other service rooms on the west. Furthermore, the windows in any room can be opened without destroying the integrity and efficiency of the system as a whole.

Throughout the pavilion, with the exception of the children's floor, ceiling fixtures providing direct light have been installed. On the children's floor the light is semi-direct. The general system has been supplemented in the wards and semi-private rooms with lights in capped flush metal boxes placed at a height over every individual bed which will enable the printed page to be read at any point on the bed, but with a lateral radius that does not impinge on the bed of the patient's

neighbor, either to his right or his left or on the patient opposite the foot of his bed.

All of the sterilizing rooms have inset sterilizers, thus eliminating the excessive heat and escaping steam of the ordinary sterilizing room.

A system has been installed which provides distilled and sterile, though not surgically sterile, water to the basins in the surgeons' wash-rooms and in the dressing rooms.

The construction of the building has advanced to the point where two floors will be occupied the fifteenth of this month. The entire structure will be completed and occupied in April.

The building when complete will represent an outlay of \$2,100,000. To this should be added an additional \$200,000 for equipment. When the nurses, who for the present will occupy the third, fourth and fifth floors, move into their new nurses' home, this pavilion will have a capacity of 679 beds and will give St. Luke's Hospital a total capacity of 1099 beds.

The architect is Mr. Charles S. Frost, who has had as his consultant Mr. L. C. Curtis, the hospital's vice-president and chief administrator.

THE ORGANIZATION OF A PHYSIOTHERAPY CLINIC IN A CIVIL HOSPITAL*

By F. B. GRANGER, M.D., BOSTON CITY HOSPITAL, BOSTON, MASS.

IN the preceding article on physiotherapy published in the November issue a general description was given of a physiotherapy clinic. In this article we will outline the equipment needed in general, special, and tuberculosis hospitals.

Essential Hydrotherapy Equipment

The following list of equipment is needed for the installation of hydrotherapeutic equipment: One electric light bath cabinet, ventilated type, preferably of steel construction and, if possible, equipped with incandescent light bulbs with carbon filaments. Cost approximately \$450. One control table, open pattern fitted with thermostatic mixing valves, quick opening compression valves with lever handles for the admission of hot and cold water, and with china indices, for the control of water to one needle, one shower, and two Scotch douches, fitted with interchangeable tips with special nickel-plated pressure gauges and thermometers. Cost approximately \$950.

One nickel-plated brass combination needle and

shower bath, with four columns fitted with rose sprays having removable faces and ball joints. Cost approximately \$300.

One nickel-plated overhead shower, with adjoining ball joint and separate supplies to floor.

One white marble or black slate stall, three feet inside by six feet six inches high by three feet deep, with necessary nickel-plated clamps and bolts.

One porcelain enamel iron roll-rim continuous bath, fitted with thermostatic valves. Cost approximately \$325.

Two special Eau Courant "whirlpool" arm baths, comprising white enamel steel tub with stand and flexible supply and waste pipes fitted with the Bardwell aerator and Leonard thermostatic valves. Cost approximately \$250.

Two special Eau Courant leg baths, comprising white enamel steel tub with adjoining iron support to floor, fitted with flexible supply and waste pipes and Bardwell aerator and Leonard thermostatic valves. Cost approximately \$250.

One white enamel bathroom scales with measuring rod.

One blanket warmer, sheet steel, white enameled, 72 inches high, 24 inches wide, 16 inches

*This is the second of a series of articles on physiotherapy prepared for THE MODERN HOSPITAL by Dr. Granger. The first article appeared in our November issue, page 404.

deep, with single door, white enameled steel shelves, aluminum bronzed steam coil with nickel-plated brass supply and return valve with ebony wheel handles. Cost approximately \$1,250. This is not essential but very useful.

Accessories for Special Machines

The following list of accessories is essential for galvanic, Faradic and sinusoidal machines:

Sixteen round electrodes approximately the size of the palm of the hand. (Asbestos type.)

Six 6 x8 asbestos electrodes.

Twelve 4½x5½ asbestos electrodes.

Six 5 x5 asbestos electrodes.

Twelve 3 x9 asbestos electrodes.

One insulated rectal electrode.

Two testing electrodes.

One special ear electrode.

Two special double eye electrodes.

One special tongue electrode.

One needle holder.

Eight electrodes with wooden handles, eight inches long, provided with thumb screw and flat metal base.

Two disc electrodes with handles.

Two square yards of wool felting.

Two square yards of copper gauze.

Two asbestos pad electrodes.

Twelve Fahenstuck clips.

Ten pounds of block tin, 24-26 gauge.

Twelve pairs of rheophores, green and red.

Four 12-16 inch glass solution bowls.

Three pairs of special distributing rheophores with five cables, fitted on one end and with standard tip for treating fingers.

Twelve Hubbel polarity plugs, fibre or rubber composition.

Fifty pounds of absorbent cotton or cellulose cotton.

Ten pounds of sodium salicylate.

Ten pounds of sodium chloride.

One-half pound of magnesium sulphate.

One-half pound of quinine bi-sulphate.

One-half pound of mercury succinamide.

One-half pound of potassium sodide.

One-half pound of copper sulphate.

To be supplied on order, one per cent solution of cocaine.

High Frequency Machine Accessories

For high frequency machines, the following equipment is adequate:

Four vacuum tube handles.

Six surface vacuum electrodes.

Two throat vacuum electrodes, curved type.

Two ear vacuum electrodes, curved and insulated type.

Two double eye vacuum electrodes, curved type.

Two rectal vacuum electrodes, curved and insulated type.

One fulgeration electrode.

Four metal electrodes for diathermy, clip type.

Three extra pairs of high frequency cords; of the same make as the machine supplied.

Five pounds of gauze bandages, 2-inch; sixteen ace bandages, 3-inch.

Two metal tubes, 18 inches long and 2 inches in diameter.

One auto-condensation mattress, on special requisition. Total cost of above, approximately \$150.

Water-Cooled Ultra-Violet Outfit

The water-cooled ultra-violet radiation outfit requires the following equipment:

One applicator quartz—intra-nasal.

One applicator quartz—pharyngeal.

One set of applicators for pyorrhea.

One applicator quartz—large, square size.

One applicator quartz—round, small size.

Set of three quartz rods, assorted sizes—sinus applicator.

Massage and Muscle Training

For massage and muscle training the equipment listed here is needed:

Sixteen massage tables or plinths.

These are more cheaply constructed in the hospital if a carpenter is available. They should be 6 feet 3 inches long, 2 feet 2½ inches wide and 31 inches high. A shelf 8 inches from the floor will secure greater rigidity for the legs of the table, and is convenient for the holding of surplus laundry.

Number of Plinths Deend on Floor Space

Of course the number of plinths provided will depend upon the floor space available. Since many cases require prolonged radiant heat, and frequently, equally as prolonged electrotherapy, and possible massage in addition, it will be readily seen that with an increased number of tables a greater number of patients can be treated within any time limit.

Sixteen mattresses for the above.

These should be stuffed with silk floss or hair, and the ticking should be covered with a thin oil-skin cover, similar to the material used for light-weight slicker raincoats. The odor from this material soon disappears and as the mattress is covered with a sheet there is no unpleasant feeling of coldness afforded the patient.

For muscle training, in addition to the exercises which will be supplied by a competent aide, very little equipment is needed. If floor space allows, one section should be marked out for the Fraenkel exercises for tabes.

How Floor Should Be Divided

Another area can be divided into squares a little larger than the size of the regulation football, and should be numbered according to the following diagram. As will be seen later, this is of value in coordinating exercises for hemiplegia.

4	2	3	1	5	11"
7"					

In the line of mechanical apparatus, the following are all that is necessary:

- One set of stall bars.
- Adjustable bar for hanging exercises.
- Six light-weight Indian clubs.
- Six light-weight dumb-bells.
- One creeping wall board for finger exercises.
- One inclined tract for flat-foot exercises.

Other Accessories and Furniture

The other accessories and furniture will depend on the local needs of the institution. Among articles generally needed are:

- Twelve to twenty-one wide arm lunch chairs.
- These are valuable not only for massage, but also for electrical treatment of the upper extremities.
- An adequate supply of electric fans, preferably of the revolving type.
- The proper filing cabinets for case histories and card indices.
- Desks—both for the physicians and for the filing clerk.
- Typewriters.
- Various types of chairs.
- Desk supplies.
- Waste paper baskets.
- Sphygmometers.
- Lockers for the aides, physicians, visitors, and for patients, in the hydro room.
- For the laundry room there should be an adequate supply of laundry baskets.
- Thirty to forty wool blankets.
- Thirty to forty pillows and sixty pillow cases.
- Four hundred to five hundred sheets.
- An adequate supply of hand towels.
- An electric sterilizer is a valuable adjunct to the ultra-violet room.
- An adequate number of hand basins and foot tubs, preferably papier maché, or thickly enameled.
- Instruments such as bandage shears, dressing

forceps, etc., are necessary in the ultra-violet room.

Expenditure for Equipment

Scales, both spring balance for muscle testing, and bathroom scales.

The above program calls for the following initial expenditure, exclusive of the furniture and other accessories:

Hydrotherapy—approximately\$2,500
Electrical apparatus 7,500

While this may seem rather a large amount, yet if even a moderate charge be made per visit, a department of physical therapeutics should be nearly self-supporting.

Minimum Equipment for Department

A list of the minimum equipment for a physiotherapy department embraces the following apparatus:

1. One large high frequency machine capable of delivering an adequate autocondensation. Approximate cost—\$700.
2. One deep therapy 1,000 watt light. Approximate cost—\$125.
3. Three type "I" applicators equipped with eight incandescent lights. Approximate cost—\$40 apiece.
4. One air-cooled ultra-violet outfit. Approximate cost—\$400.
5. One portable high-frequency for diathermy. Approximate cost—\$250-\$275.
6. Accessories for high frequency:
 - a. One auto-condensation pad.
 - b. One metal handle for auto-condensation.
 - c. Ten pounds of block tin, gauge 22 (for diathermy.)
 - d. One fulgeration electrode.
 - e. One universal handle for vacuum tubes.
 - f. Two surface vacuum electrodes.
 - g. One curved-stem double vacuum electrode.
 - h. Ear vacuum electrode.
7. One galvanic sinusoidal machine.
They vary in price in accordance with the current source at the hospital. If the current is direct the machines are cheaper. If the current is alternating, it will be necessary to buy a motor generator to change the alternating current to direct.
8. One galvanic controller with meter.
These run around \$60 for the direct current.
9. One Bristow faradic coil.
Approximate cost—\$40.
10. Accessories for the above.
 - a. One nerve tester with interrupter handle.
 - b. Six pairs of conducting cords (Reophores).

- c. Six asbestos type electrodes—4x5 inches.
- d. Six asbestos type electrodes—3x9 inches.
- e. Six asbestos type electrodes—5x7 inches.
- f. Absorbent cotton, or cellucotton, in order to have a fresh electrode covering for each patient.
- g. Two round electrodes, asbestos covered, with wooden handle.

Massage and Reeducational Exercises

For massage and reeducational exercises, the following equipment is needed:

1. Four massage tables or plinths, six feet three inches long, two feet and a half wide, and thirty-one inches high.
2. Four mattresses for the above.
3. Gymnasium equipment.
 - a. Stall baths.
 - b. Adjustable bar for hanging exercises.
 - c. Light-weight Indian clubs and dumb-bells.

This apparatus is all that is really needed.

Apparatus for Special Hospitals

Special hospitals will require special equipment. For example, a hospital which specializes in industrial accidents will need an increased number of high-frequency machines for diathermy, whirlpool arm and leg baths, plenty of bakers for radiant heat, one or two Bristow coils and a similar number of galvanic sinusoidal machines.

Or, expressing in more concrete terms, a hospital treating industrial accidents averaging forty cases a day, with two technicians, will need four or five portable diathermy machines; one water-cooled ultra-violet; six radiant heat bakers (preferably in two or three sizes); two Bristow coils; one or two galvano sinusoidal machines; three or four massage plinths and mattresses; six six by eight asbestos electrodes; six four and one-half by five and one-half asbestos electrodes; six five by five asbestos electrodes and six three by nine asbestos electrodes; twenty pounds of block tin, gauge eighteen; 100 pounds of cellucotton; two vacuum and two non-vacuum surface electrodes; two universal handles; one fulgerating outfit; one double eye vacuum tube and one nerve testing electrode with interrupter handle.

On the other hand, a neuro-psychiatric hospital of a hundred-bed capacity would require one or two electric light bath cabinets, ventilated type; one control shower; one control table with Scotch douche; five or six continuous baths equipped with Leonard thermostatic valves in order to insure a neutral temperature of 94-96 degrees Fahrenheit; two large type high frequency machines capable of delivering not only an adequate diathermy but also auto-condensa-

tion (the latter has a distinct sedative effect on those nervously excited); one or two deep therapy lights; one Galvanic sinusoidal; one Faradic coil (the latter is necessary in cases where it is desired to obtain the electrical reaction for nerve degeneration); one air-cooled ultra-violet; massage plinths, number dependent upon the number of technicians; an accessory list similar to that described under industrial hospitals.

Equipment for Tuberculosis Hospitals

In the past in tuberculosis hospitals, treatment by rest has in many cases been carried to an extreme. Recently it has been realized that carefully selected physical treatment applied with the utmost precision is of distinct value in this field.

At one time the value of physical measures, particularly that of ultra-violet ray, was over-emphasized and much harm was produced, particularly in the pulmonary types of tuberculosis.

There probably is no question but that the ultra-violet, either in the form of heliotherapy or its artificial substitutes such as the carbon arc light, or the mercury arc in a quartz burner, has a distinct place in the treatment of surgical tuberculosis.

The same is true at certain stages in pulmonary tuberculosis provided an exact technique is employed. Therefore, in a tuberculosis hospital, ultra-violet and radiant heat are factors of prime importance.

Of course there are complications coincident with tuberculous conditions which necessitate the addition of a few extra pieces of apparatus. The following is needed in tuberculosis hospitals of two hundred-bed capacity:

Two technicians.

Three ultra-violet lights—air-cooled.

One water-cooled ultra-violet light with stand and list of applicators given above.

Three deep therapy—1,000-watt lights.

Three eight light heat applicators.

One portable high-frequency machine for diathermy.

One galvano sinusoidal.

Accessories similar to those given in above list for use in small hospital.

Not infrequently hospitals desire to raise a small sum of money for the purpose of purchasing a special piece of equipment or to extend some phase of their service. Here are three methods that have been used successfully by various hospitals: give a radio benefit concert; hold a garden flower show and sale; hold in the local schoolhouse an exhibit of paintings loaned by friends of the hospital.



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THE SOUL OF THE NURSE

EVERY administrator of experience has learned that, granted skillful craftsmanship, the most important qualities which his subordinates must have are those of the soul, qualities which enter into the formation of the ingrained personality, qualities which determine the success or failure of the individual and the organization to a greater extent than any other factor which is a part of collective effort.

In this connection the word soul is not used in a religious sense but rather connotes those attributes which are the essence of character and hence the guiding force in the affairs of life. They are not peculiar to any profession or occupation but they are particularly essential to the nurse who, in her contact with the mentally and physically ill, is called upon to exhibit the highest quality of character.

Unfortunately, nurses in their training (and this applies equally to most of the professions) are not given an analysis of those traits of character which may be their protection or undoing in their life's work and when they are brought face to face with them, realize but dimly their importance. Like many other qualifications they are partially innate; always they are capable of cultivation; with care they may be developed and rounded out until that noblest of women is produced—the Ideal Nurse. Crystallized, these essentials reduce themselves to three, with several subdivisions. They are common sense, earnestness and honor.

Common sense includes those good, sound, ordinary intuitions which are supposedly common to all mankind. It is the congener of judgment, that operation of the mind involving comparison and discrimination and by which knowledge of values and relations is formulated. Common sense and judgment have as their background knowledge and always the common-sense thing to do is the right thing to do. All common sense is based on charity and justice, kindly, tactful charity and justice administered with that keenness of perception, discernment, deduction and discrimination known as acumen.

Allied to it is simplicity, the antithesis of affectation. Simplicity connotes a sense of humor, that rare virtue which is the antidote for dry egotism and which permits a disassociated view of self absurdities. The great forces and the great people of this world are simple. It is only the weak, the inefficient and the lazy who are obliged to resort to the protective mimicry of conceit and artificiality.

Part and parcel with simplicity is self-control, the secret force which controls others. Power of

will and power of self-restraint require strength of feelings and strength of self-command; they are the cornerstones of strong character. An ungovernable temper is the symptom of defective mental poise, an impotence of coordinated effort. Those who shout, nag, taunt or are vindictive cannot inspire confidence in their associates. The higher the vocal note, the lower is the effect produced. Sarcasm indicates inadequacy of self-control and is a weapon which wounds those who use it. Tact, the oil which lubricates the bearings of human intercourse is, on the contrary, an efficient instrumentality in accomplishment.

Earnestness is sincerity of effort. Without it there can be no real success. Energy, enthusiasm and perseverance are its handmaidens and assiduity, the ability for hard work, application and diligence, its result. Possession of these qualities forefends against defeat. They are qualities which have won the day at many a bedside. Inspired by faith—faith in the cause, in oneself, in mankind and in a divine Providence—they move mountains. True faith breeds true optimism, the quality of seeing only the best in men and situations, a heartener when reverses come, a shining beacon marking the course to achievement. Faith, though, cannot stand alone; it must be supported by courage. But courage as a quality must be continuous. It does not imply fearlessness; on the contrary, it knows fear and conquers it and when this virtue is strong in withstanding adversity it becomes fortitude, an ability to labor on against threatening defeat and to overcome the forces of disease and death. Earnestness is the parent of steadfastness and poise and from these issue dignity, that virtue of calmness and equanimity of mind and action which is an inspiration to the sick.

Essential as is common sense and absolutely necessary as is earnestness, they are valueless without honor, the inherent virtue of every normal, unvitiated mind. Its cornerstone is truthfulness. In the nurse's more than in any other profession, accuracy of mind and tongue is a vital necessity, because on it may depend human lives or happiness. Courage enters into its formula because of the readiness with which moral cowardice prompts deviation from the line of exact truth. Honor is an unselfish virtue; it places the task ahead of the worker and when necessary sacrifices the latter to the former. It is a sheet anchor in temptation, a guide in conduct, and an inspiration to the highest and best. It shines brightly in defeat and is modest in success.

These are the blocks which fitted together make the mosaic of the nurse's soul. It is no wonder then, that the nursing profession is honored of all

men, that they who coax the tired spirit back into the weary body are the emblem of all that is noblest, most selfless and sublime.

WHERE DEFECTIVE WIRING COST LIFE

Every year during the Christmas season we hear of fire casualties from the presence of Christmas trees. The fire hazard has, of course, been measurably decreased since electrical fixtures have replaced lighted candles on the tree, but the use of electric lights has not entirely eliminated the fire hazard.

This year a private hospital in Boston became a victim to the Christmas tree evil on the afternoon of January 4. According to press notices, a short circuit ignited the tinsel on the tree and the blaze swept through the building before those inside the hospital were aware. Notwithstanding the heroism of the nurses and others in their attempts to rescue patients from the blazes, one patient suffocated and more than a score were injured, while the building was completely destroyed.

The district attorney who investigated the case reported that, although his inspection did not reveal any evidence of violations of the present fire hazard and egress laws, he was convinced that safety provisions for hospital patients were wholly inadequate.

The inspector's report is of significance in that it draws attention to the eminent fire hazard which often lurks in buildings apparently "safe" according to state and local fire laws. As a result of the fire all hospitals in Boston have been notified to install sprinkler and automatic fire alarm systems by April 1. These protective measures for combatting possible future fires are needed, and it is regrettable that such precautions are not taken before catastrophes occur, but they do not aim to eliminate the cause of the fire. In this particular case, the hazard lay in defective wiring.

Coming just at this time of year, the Boston catastrophe becomes sensational, but it should be remembered that a large number of hospital fires every year are caused by defective wiring. The catastrophe in this hospital is a salient reminder to hospitals of the wisdom of thoroughly inspecting all electric wires as a safeguard to patients and employees.

TRAINING FOR HOSPITAL ADMINISTRATION

MUCH is being written and said about training for hospital administration. As the demand increases for better and better administrative ability, the limited facilities for

training become more apparent. Except in the very large cities, hospitals are not big enough to warrant the employment of a full-time assistant or assistants who may "work up" into the higher rank. The medical staff of such institutions generally includes the successful physicians and surgeons of the community. They are not interested in the superintendency as an avocation for themselves, either because they do not care to leave active practice or probably because the compensation is meager. The hospital must look elsewhere for its candidates for superintendent and the facilities for training him.

Schools of commerce in the large universities offer courses in business administration. They might recognize the need for a specialized type of administrator in the hospital field. These schools are located, for the most part, in the large cities, where there is ample opportunity for first-class practical experience in both large and small general and special institutions. Hospitals undoubtedly would be glad to cooperate with these colleges in the development of a course for administrators which should include both theoretical and practical instruction.

ANNUAL HANDBOOKS FOR STATE HOSPITAL ASSOCIATIONS

THAT was an interesting suggestion which Father Bourke threw out at the recent meeting of the Michigan Hospital Association when he urged the association to publish an annual Michigan hospital handbook. His outline of its contents will be found in our account of the recent annual meeting of this association which appears on pages 181-185.

While some of the material suggested by Father Bourke may be found in the *YEAR BOOK* issued by The Modern Hospital Publishing Co., Inc., the greater part of it, which is largely of a local nature, could not properly be included in such a volume. The book suggested by Father Bourke, if placed on the desk of every superintendent in Michigan, would undoubtedly save Michigan hospital executives much time, make it easier for them to get in touch with their fellow administrators, increase their efficiency, aid them in cooperating with the state and national bodies which bear a relation to their work, and assist in developing the esprit de corps of the association as a whole.

Not infrequently national and state laws and the rules and regulations of state bodies go unobserved because hospital superintendents are not familiar with their details. In some instances superintendents do not even know of their existence.

A reference book such as has been suggested would obviate all of this.

This is a suggestion that other state associations might well act upon. As the author of the suggestion pointed out, the publication of such a handbook should be a successful venture, as popular demand would make it a good seller. Thus, the secretary of the association or its publicity committee, if one were appointed, could, with the exercise of a little energy, practically sell enough advertising space in the book to meet all or the greater part of the expense of its publication.

SHOULD HOSPITALS FINANCE THEIR CONFERENCE DELEGATES?

IN ENDEAVORING to find ways and means of increasing the attendance at the annual meetings of the Michigan Hospital Association, Dr. T. K. Gruber, in his annual address as president, emphasized the desirability and fairness of having the expenses of delegates to these conferences paid by the hospitals they represent rather than by the delegates themselves.

Undoubtedly attendance at the Michigan Hospital Association meetings, and in fact at meetings of all state hospital associations, is curtailed by the fact that many superintendents, were they to attend these meetings, would have to pay the expense they incurred out of their own pockets. This is a mistake, as we have hitherto pointed out in discussing this question in relation to the annual conferences of the American Hospital Association. Delegates to these conferences may derive a little personal pleasure and recreation while in attendance, but in the main they are there for two principal reasons, first, to glean from the experiences of others whatever they believe will be of direct benefit to the institutions they are administering and, second, to contribute out of their own experience for the benefit of their fellow-administrators. If meetings are well attended and the papers and discussions good, they return better informed executives and with a stimulus to do more efficient work. The institutions they serve as executives are largely the gainers and as such should be willing to meet the expense.

Human life is made up of the two elements, power and form, and the proportion must be invariably kept, if we would have it sweet and sound. Each of these elements in excess makes a mischief as hurtful as its defect. Everything runs to excess; every good quality is noxious, if unmixed, and, to carry the danger to the edge of ruin, nature causes each man's peculiarity to superabound.

—Emerson.

WINNERS OF PRIZE ESSAY CONTEST ANNOUNCED

WINNERS of the Modern Hospital Publishing Company's prize essay contest on "The Interrelationships of Hospital and Community," which closed November 1, 1924, were named at the recent meeting of the committee of award.

Six contestants whose essays took precedence over the other contributions considered by the judges, have been named for prizes and honorable mention. The prizes were awarded as follows: Mr. Edward A. Fitzpatrick, dean, graduate school, Marquette University, Milwaukee, Wis., first prize of \$350; Dr. Lucius R. Wilson, assistant superintendent, Barnes Hospital, St. Louis, Mo., second prize of \$150; Dr. D. L. Richardson, superintendent, Providence City Hospital, Providence, R. I., third prize of \$100. The judges accorded honorable mention to Mr. John R. Howard, Jr., superintendent, New York Nursery and Child's Hospital, New York, N. Y.; Mr. H. J. Southmayd, assistant superintendent, Mount Sinai Hospital, Cleveland, Ohio, and Miss Zella Nicolas, R.N., Teachers' College, Columbia University, New York, N. Y. These three contestants will receive suitably inscribed certificates indicative of their title to honorable mention in the contest.

Value as Scientific Approach a Criterion

Each of the essays complying with the requirements of the contest were read individually by the three judges and their decision was made preceding the collective decision of the committee as a whole. In accordance with the program of

the competition published in the July, 1924, issue of the magazine, the judges based their decisions upon the value of the essay as a scientific method of approach in solving the problem of hospital and community relationships. Their judgment in this matter was guided by the ability with which the following essentials were treated: (a) adequacy of bed capacity; (b) minimum services; (c) additional desirable services to meet the community's need; (d) out-patient service; (e) staff and staff relationships; (f) relation of hospital to various community health and public welfare organizations; (g) attitude of public toward hospital and how it can be influenced.

The committee of awards, composed of Dr. Haven Emerson, professor of public health administration, Columbia University, New York, N. Y., chairman; Mr. Michael M. Davis, Jr., executive secretary, committee on dispensary development, Associated Out-patient Clinics of the City of New York; and Dr. Willard C. Rappleye, superintendent, New Haven Hospital, New Haven, Conn., met in New York, December 15 to arrive at a common opinion upon the essays.

Upon receiving the report of the committee at the editorial offices of The Modern Hospital Publishing Company, the contest editor broke the seals of the essays which corresponded in number to those which the committee had chosen as winners. Telegrams conveying the decision of the judges were immediately sent to the successful contestants.

The comment of the judges in



The committee of awards: (left) Dr. Willard C. Rappleye; (center) Dr. Haven Emerson, chairman; (right) Mr. Michael M. Davis, Jr.

arriving at their decision for award of first place follows:

"The thoroughness and scholarly manner of presentation, orderliness of arrangement, and, in general, the adequacy of essay (No. 4) to which the first prize has been awarded were the special qualifications upon which we based our selection."

A perusal of the first prize essay, which appears on the following pages, will convince the reader, we believe, of the correct decision of the judges as to the merits of the essay in treating at length the points outlined in the program of the essay.

In commenting upon the essay chosen for second place, written by Dr. Wilson, the judges said:

"The directness and simplicity of the description and of the program in this essay seemed to justify the awarding of the second prize."

This essay will be published in a subsequent issue of the magazine.

The third prize essay, written by Dr. Richardson, received the following comment from the committee:

"The ideas expressed and the general spirit shown in the treatment of the situation as presented in this paper, justifies the awarding of the third prize to this essay, in spite of the fact that there is a certain lack of definiteness in recommendations and proposals offered."

In arriving at their decision as to the essays which were to receive honorable mention, the judges expressed the opinion that the three essays chosen possessed certain features which made them worthy of recognition, although they did not meet sufficiently the general terms of the competition as to justify a higher rating.

The following comment was made by the judges upon the essay of Mr. John R. Howard, Jr., accorded honorable mention:

Particular Hospital Traced to the End

"In this paper, the point which we found of

special merit is the description of a hospital offering a particular type of service with a degree of completeness that is unusual, and is sufficient detail to put the reader in touch with every phase of an important and well-ordered piece of medico-social work under hospital auspices."

Commenting upon the essay of Mr. Southmayd, the judges said:

"This essay presents in better detail and with a better vision of its usefulness, the topic of the hospital council, or central hospital and social coordinating agency, than any of the other essays submitted, and it is for this reason that we bring this paper to your attention as a suitable one for honorable mention."

The committee's reason for awarding honorable mention to the essay of Miss Nicolas is expressed in the following comment:

"In proposing this essay for honorable mention it is not because of the detailed or adequate presentation of a hospital's relationship to the community but because of the imagination, vividness and sympathy with which a picture of a hospital service in a particular situation has been represented in a style admirably adapted to publication, and with a dramatic quality eminently fitted to rouse community interest and the support of intelligent citizens for their hospitals."

A cross section of the winners with respect to

their connection with the hospital and public health and community work is of interest as a fair representation of the participants in the contest. Among the winners we find three superintendents and one assistant superintendent of hospitals, men who are actively engaged in solving the problems of the hospital and community.

The winner of the first prize, while not actively engaged in either the public health or hospital field, has, through long experience in community work from the standpoint of educational and health interests, a perspective which enables him to grasp the situation in its entirety.

The only woman to receive recognition in the



Mr. Edward A. Fitzpatrick, winner of first prize.

competition is one who, through her nursing experience in the hospital together with her study of community health and nursing problems, has a clear vision of the true relationships of hospital and community, and how they may be worked out in every-day practice.

Two Winners from Middle-West

From the standpoint of geographical distribution, the Mid-West is well represented in its interest in hospital problems, since the first two prize winners and one of the contestants to receive honorable mention are from the Middle-West. Since two of the contestants come from New York City and one from Rhode Island, the hospital center of the eastern states comes in for half the honors in the competition. The first prize winner is listed in the 1924-25 "Who's Who in America," while two others of the six winners are nationally known for their work in the hospital and community health fields.

Short biographical sketches of the winners follow:

FITZPATRICK WINS FIRST PRIZE

Mr. Edward A. Fitzpatrick, while now claimed by the state of Wisconsin, is a native New Yorker. He received his academic education in New York City and his three degrees from Teachers' College, Columbia University. For ten years, from 1903 to 1912, he was a teacher in the public schools of New York City. In the latter year he became connected with the New York Training School for Public Service and was assigned to the Wisconsin State Board of Public Affairs for educational investigations. From this time until 1917 he held the position of secretary of the Committee on Practical



Dr. Lucius R. Wilson, winner of second prize.

Training for Public Service and director of the Society for the Promotion of Training for Public Service.

In 1917 he was commissioned major in the United States Army in charge of draft administration for the state of Wisconsin. From 1919-1923 he was secretary of the State Board of Education of Wisconsin. During this time he was also on the faculty of the University of Wisconsin as

a conductor of seminars on public educational administration and also served in charge of the survey of Wisconsin continuation schools until 1921.

He has won recognition in Wisconsin for the active part he has played in promoting educational legislation in the state. He drafted and sponsored the first minimum wage law for teachers in that state, in 1913. He is author of the law authorizing the es-



Mr. John R. Howard, Jr., awarded honorable mention.

establishment of training schools for public service at the University of Wisconsin, and of the Wisconsin education bonus law, and the half-time school law for children in industry, in 1921. He is also an investigator of the Federal Commission on Industrial Relations.

Author of Several Books

Mr. Fitzpatrick is also well known as the author of several books on various phases of education and public welfare. Some of these are: *Budgetmaking in a Democracy*; *Public Administration and the Public Welfare* in *Freedman's America and the New Era*; and *The Educational Views and Influence of De Witt Clinton*. From 1916-17 he was editor of the *Public Servant*, a monthly magazine; also of *Wisconsin's Educational Horizon*, a bi-monthly magazine of the state board of education, since 1919.

Now Instructor in Hospital College

Although Mr. Fitzpatrick has won recognition chiefly because of his work in the field of education, recently he has turned his attention to research in hospital work and is now vitally interested in the subject of hospital administration. During 1923-24 he organized, in connection with a hospital supply company, a research agency which would serve as a bureau of information and advice on hospital problems, with particular attention to the development of hospital equipment.

Last September Mr. Fitzpatrick became dean of the graduate school of Marquette University, Milwaukee, Wis., with a major assignment as educational director of the hospital college. He is now devoting his time to lecturing in the hospital college and to studying its development with a view toward a better educational organization of the courses offered.

DR. LUCIUS R. WILSON

Dr. Lucius Roy Wilson, probably one of the youngest contestants, is a native Missourian. He was born in

Jonesburg, in 1896, where he received his preliminary education. He was graduated from the University of Missouri, Columbia, in 1918, receiving the degree of bachelor of arts and medical certificate covering two years of work in the school of medicine. He entered Washington University, St. Louis, in 1918 and received his medical degree from there in 1920.

He served as intern in the obstetrical and gynecological service at Barnes Hospital, St. Louis, in 1921. Immediately upon the completion of his internship in June, 1921, he was appointed assistant superintendent of Barnes Hospital, which position he now holds.

DR. D. L. RICHARDSON

Dr. D. L. Richardson, winner of the third place, is widely known throughout the hospital field as an authority on contagious diseases. Since 1910 he has been superintendent of the Providence City Hospital, Providence, R. I.

He was born in Newport, Maine, in 1879. He was graduated from the Maine Central Institute in 1896 and received his A. B. degree from Bates College in 1900. He then became principal of the Maine Central Institute, Pittsfield, which position he held until 1901 when he entered medical school of the University of Pennsylvania. He was graduated from there in 1905 and then served as intern for two years at the Rhode Island Hospital where he was assistant superintendent until 1919 when he became superintendent and resident physician of the Providence City Hospital which positions he now holds.

MR. JOHN R. HOWARD, JR.

Mr. John R. Howard, Jr., who received honorable mention, is well known in the hospital field as superintendent of the New York Nursery and Child's Hospital and for his work on the committee on admissions of the Associated Out-Patient Clinics of New York, a report of which appears on page 162 of this issue of the magazine. He is also well known for his frequent contributions to social and public health literature in magazines and to national conventions.

He was graduated from Harvard University in 1904, and was a member of the first class of the Boston School of Social Workers in 1905. Since that time he has taken an active part in public health work. While headworker of Welcome Hall, in Buffalo, N. Y., he was active in the organization of the tuberculosis association, the establish-

ment of the first tuberculosis clinic and the inauguration of the physical examination of school children. In Philadelphia, when secretary of the Starr Center Association in 1910, he directed a dispensary for children and, in connection with a system of school lunches, made a study of undernourishment among school children.

While he was secretary of the Thomas Thompson Trust, Boston, from 1910-1913 which fi-

nanced hospitals in Brattleboro, Vt., and Rhinebeck, N. Y., he conducted in Brattleboro a complete system for the care of the sick in their homes, and in Rhinebeck, "A Study of Sickness in Dutchess County," which was published by the State Charities Aid Association of New York.

From 1913 to 1918, Mr. Howard was superintendent of the New York Orthopedic Dispensary and Hospital, and took an active part in the committee on After-care of Infantile Paralysis, following the poliomyelitis epidemic. After two years in which he was organizing secretary of the New York War Camp Community Service, Mr. Howard returned in 1921 to the hospital field, as superintendent of the New York Nursery and Child's Hospital which position he now holds.

MR. H. J. SOUTHMAYD

Mr. H. J. Southmayd, who received honorable mention, has for some time been actively engaged in hospital and public health work in Ohio. His first work of that nature was with the state department of health in the division of tuberculosis which had supervision of the county and district tuberculosis hospitals. This committee was active in promoting the establishment of tuberculosis hospitals throughout the state.

He was on the committee appointed by the governor of the state, to conduct the survey of hospital facilities. This committee recommended that a bureau of hospitals be established in the state department of health. Mr. Southmayd was appointed head of this bureau which was established to conduct the survey and organize the registration and reporting of hospitals to this department. A report of the survey is now being published as a legislative document.

Following that work he became assistant superintendent of Mount Sinai Hospital, Cleveland. Last year he assisted Dr. A. C. Bachmeyer in making a study of the cost of operation of Cleveland hospitals participating in the community fund. This work is being done under the auspices of the Welfare Federation of Cleveland.

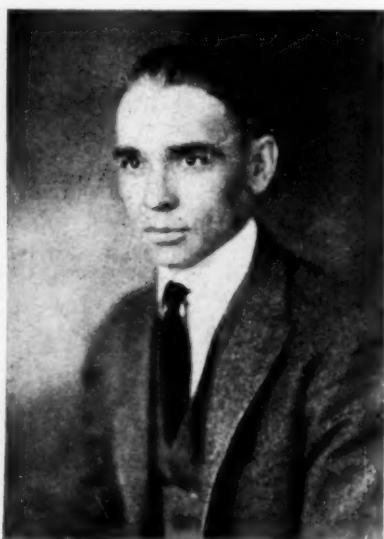
MISS ZELLA NICOLAS

Miss Zella Nicolas, the only woman to receive recognition in the contest, is at present a student at Teachers' College, Columbia University, New York, N. Y., from which she will receive the degree of bachelor in the department of nursing next June.

She is a native of Minneapolis, Minn., but spent her early life in Seattle, Washington, where she received her early education. She was graduated from the school of nursing, Mount Sinai Hospital, New York, N. Y., in 1920 and is at present, president of the Mount Sinai Alumnae Association and editor of the *Mount Sinai Alumnae News*.



Miss Zella Nicolas, awarded honorable mention.



Mr. H. J. Southmayd, awarded honorable mention.

INTERRELATIONSHIPS OF HOSPITAL AND COMMUNITY*

THE hospital field has, up to the present time, focused most of its attention upon the problems of hospital construction; administration and organization have received but relatively little attention. Of more fundamental character, however, and conditioning all of these aspects, is the problem growing out of the interrelationships of hospital and community. This problem has been neglected. Of what significance is the apparent solution of the construction, administrative, or organization problems of a hospital if there is no social need for the hospital, or if existing facilities are duplicated and a competition for patients or for surgeons is begun which demoralizes the entire community hospital service.

Of late years there has been an increasing recognition of the importance of the community aspect of hospital service. The chaos of the present situation, the accidental or whimsical determination of major aspects of hospital service, the drifting, which is characteristic of much of our social life, are the basis of the insistent call for a frank facing of the meaning and objectives of a community hospital problem, and a scientific method of approaching the problem.

Social Loss of Many Hospital Practices

There is accumulating evidence of this recognition for comprehensive planning of hospital service on the basis of the knowledge of community needs. The failure to realize the fundamental character of community need rather than whim or mere personal predilection of individuals has resulted in social loss in the community returns from its available social energy as expressed in funds available for hospital work, as follows:

1. Adding another general hospital to a community hospital service when a special hospital would, on a moment's reflection, better serve its needs.
2. By turning over, in effect, funds to the architects, to build monuments to their architectural genius, or to permit external beauty to determine construction instead of internal need, based on a study of the community.
3. By permitting the personal predilections of the chief of staff or a dominant member of a staff to determine the provision to be made of the various hospital services and to over-emphasize or under-emphasize phases of a complete essential program.
4. By permitting wealthy donors, or even prospective donors to decide what character and extent of hospital service shall be provided, merely on the basis of their whim, or desire, or presumption.
5. Hospitals are built without reference to predictable future expansion both as to amount of land needed or as to central hospital services.
6. The community funds are not made to go as far as possible in actual hospital service, because of untrained administration, uncertain administrative procedures, lack of adequate knowledge of what is happening in the hospital as to supplies, to food or other consumable articles.
7. Reports to the public as to character and extent of services rendered, costs, deficiencies, budgeting of definite needs are not made, or so poorly prepared and presented as to be unintelligible to even the specially interested public who might help.
8. The adding of departments to hospitals (occasionally beyond the financial resources of the hospital) merely for the sake of institutional completeness.
9. The building of hospitals of a certain size or kind in order not to be outdone by a rival community.
10. The building of a hospital similar to one that may

have been inspected elsewhere because it appealed to someone's fancy, not because it meets the local community needs.

Rudimentary Sense of Community Planning

There are, of course, somewhere in the United States exceptions to these failures and inadequacies, but the fact that they are generally prevalent is clear evidence of our rudimentary sense of community planning, of community program and of community responsibility. The community accepts hospital service as it is without question; it is not particularly informed about it, and is without any developed conscience as to responsibility, cooperation, or opportunity for service to individuals, whether the hospital is privately endowed or governmental.

Social Survey Basis of Program

There is no general solution of the problem; there must be the intimate knowledge of close study of the actual situation.¹ Helpful and useful as may be the experiences of other people in other places, or of present hospital officers in other places, the determination of how much and what shall be used must depend on the actual facts in the local situation. In other words, fundamental to any program of hospital service must be a social survey—a comprehensive knowledge of the facts—verifiable facts, as a basis for comprehensive planning of community needs, and so presented as to be unevadable both in their accuracy and in their import. "The survey," says Shelby M. Harrison,² "is an implement for more intelligent democracy, its chief features or characteristics being: the careful investigation, analysis, and interpretation of the facts of social problems; the recommendation and outlining of action based on the facts, and the acquainting and educating of the community not only to conditions found but to the corrective and preventive measures to be adopted. Moreover, the survey lays emphasis upon the importance of studying problems in their various community-wide relations and urges cooperative action on a community-wide basis. It deals with the whole district and endeavors to lead individuals to think in terms of the whole. It is the application of scientific method to the study and solution of social problems."³ "It is a process of peaceful civic renewal, through the scrutinizing of conditions surrounding our daily living, with a view not only to correcting those that are unwholesome, but to quickening any that show promise."

Survey of New York Hospital Conditions

An excellent illustration of how helpful a well-conceived and well-executed community survey might be (1) in understanding hospital conditions, (2) in working out a basis of cooperation of existing agencies and (3) in planning future facilities, is the survey of the hospitals of New York City made by the public health committee of the New York Academy of Medicine.

New York City with its famous hospitals, its great university medical schools, with its noted hospital ad-

*Essay of Mr. Edward A. Fitzpatrick, awarded first prize in the Modern Hospital Publishing Company's essay competition on "The Interrelationships of Hospital and Community," which closed November 1, 1924.

1. Joseph J. Weber, M.A., *First Steps in Organizing a Hospital*, chapter 1, pp. 18-43.

2. Shelby, M. Harrison, *Community Action Through Survey*, page 11, The Russell Sage Foundation.

3. Shelby, M. Harrison, *Community Action Through Surveys*, page 11. *Ibid*, page 26.

ministrators, shows the weakness of unguided community action, and the inevitable result—a farrago of hospital services, excellent and mediocre, large and small, expensive and gratuitous, general and special.¹

What Is the Hospital Community?

One of the important results of these social surveys is a new conception of the community limits. In our usual mechanical way in dealing with social matters we accepted the political divisions as the community divisions. The influence of banks, schools, of churches, of the stores of a city or village, extends beyond its political limits. The church community is different from the bank community, the school community is different from the trade community, but in every case the extent of the community varies with the individual aspect of it. The study of the extent of influence of hospitals has not been made as, for example, Mr. Galpin, now of the U. S. Department of Agriculture, did for the various community factors, schools, churches, banks, retail stores, in his *The Social Anatomy of an Agricultural Community*. The hospital community is not confined to the imaginary lines of political divisions. The influence of the Mayo Clinic is nation-wide, and even international—that is its community. This is true in more or less degree of other hospitals and clinics. This fundamental fact must be kept in mind in any plan of adapting hospital facilities to community needs.

The hospital is one of the most important agencies of the public health program of the community. Some would seem to imply that it is the sole agency. The hospital must not be conceived as an isolated agency or even a self-sufficient agency. But family doctors, specialists, hospitals, schools, gymnasiums, recreation facilities, educational publicity, or propaganda, if you will, all must be conceived as mutually reinforcing agencies in a comprehensive community program.

1. The Hospital Situation in Greater New York V—"The present volume is the report of a study of hospital conditions in New York City. The survey was undertaken because of the rapid growth of hospital accommodations, a growth unguided by a community policy concerning the need of further services and the better adjustment of existing facilities to the requirements of the metropolis. We have in New York City a farrago of hospital services, excellent and mediocre, large and small, expensive and gratuitous, general and special. Until recently there was no agency in the city which was fully conversant with the facts in the situation. The survey was undertaken with a view of ascertaining the existing hospital services, analyzing the excellencies and deficiencies of organization and management, and making suggestions for such improvements and changes as seemed desirable. If in the report more emphasis is laid on the shortcomings than on the many achievements of our institutions, it is not done in any spirit of disparagement of their splendid work, but in the belief that constructive and friendly criticism is of a greater social value than unqualified praise which may lead to self-complacency. At the present time, the hospitals in New York City are much better equipped and administered than ever before; they are served by as competent and conscientious a corps of physicians and nurses as they have ever had; and they deservedly enjoy the confidence of the public to a greater extent than at any time in the past. The utilization of hospitals on the part of the sick has greatly increased, and this has created greater popular interest in hospitals and placed upon them even greater demands for efficiency in the discharge of their community responsibility."

In this program the public health department of the community should have as its primary function the correlation, coordination and cooperation of all the actual and potential agencies of public health. The public health department is the constructive center of cooperation of all the public health agencies. To fail to take advantage of the privately endowed or privately supported agencies would be an inexcusable neglect of what the country over is the largest factor in public health, whether we view the problem on its institutional or its personal side.

Government Aid and Social Insight

For the private agencies to disregard the government is fatal to their community responsibility and range of service. Government acts in the name of all of us, it is

our authorized agent, it has plenary social power, but through indifference, inefficiency or perversion, it may aggravate conditions it was designed to alleviate. In other words, it is a great power for social good or social evil. The presence, too, of governmental power gives us a false sense of security. But notwithstanding this danger, in a community that had enough social insight or social vision to rise to a community conception of its responsibility for public health, the health department could, by stimulating private effort in hospital work, by pointing out hospital needs, by educating the public to the available hospital facilities, assist every agency of public health. In this way we would avoid the all too frequent, institutional rivalries, the duplication of existing facilities, and the

"Of what significance is the apparent solution of the construction, administrative, or organization problems of a hospital if there is no social need for the hospital, or if existing facilities are duplicated and a competition for patients or for surgeons is begun which demoralizes the entire community hospital service."

"The community accepts hospital service as it is without question, it is not particularly informed about it, and is without any developed conscience as to responsibility, cooperation, or opportunity for service to individuals, whether the hospital is privately owned or governmental."

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"Where a health department is hopelessly inefficient, or socially blind or unready for social responsibility, a cooperative council of all the public health factors ought to assume these functions and the hospitals should take the leadership in such a movement."

isolated character of hospitals and make each a reinforcing agency of all. The existence of health departments, their legal status and social power makes them the natural agency of cooperation and of clearing house. Where, however, a health department is hopelessly inefficient, or socially blind or unready for social responsibility, a cooperative council of all the public health factors ought to assume these functions and the hospitals should take the leadership in such a movement. This would serve as (1) clearing house for all matters of public health, (2) a means of continually studying or surveying community needs and facilities, (3) an agency for bringing to bear on the local problem the helpful experience of other places anywhere in the world, and (4) a source of constructive publicity on the facts, plans, facilities of public health throughout the year.

Four-Fold Community Responsibility

In the public health program services that are to be performed by a hospital which feels its community responsibility are:

1. To care for the sick—medical function.
2. To help train public health personnel—physicians, nurses, social workers, that is, strictly teaching function.

3. To help educate the community in public health and personal hygiene problems—its social function.

4. To throw light on the problems of medicine, public health and personal hygiene—its research function.

Let us look at the functions of the hospital in more detail. The primary service of the hospital is to care for the sick; this medical function makes possible its teaching, social and research functions. This is the motive leading to the establishment of hospitals; other things grow out of it.

The same point may be stated in another way. The primary responsibility of the hospital is to the patient. It does not exist for doctors, nurses, social workers, but that each of these may most efficiently serve the patient.

So far as the individual patient is concerned the hospital, to meet this primary responsibility, must provide:

1. Trained and competent personnel everywhere, house physician, nurses, technicians, and auxiliary workers, adequate in number to serve the patient when service is required.

2. Every condition, including the best equipment, adequate light, space, and accessories, so that the individual surgeon (and of course resident and visiting medical staff generally, nursing personnel, technicians and auxiliary staff) shall be able to render this service with the maximum result in the curing and recovery of the patient.

3. An efficient organization so that every worker in the hospital is able to render his best service to the patient at the time it is needed.

4. A physical environment where all the elements of successful treatment and handling of patients can be applied, including proper food, ventilation, heating, and lighting; and last:

5. An atmosphere conducive to recovery, which embraces such imponderables as kindness and courtesy to the patients and their relatives on the part of the administrative and professional staffs; quiet, comfort and cheerfulness.

The Survey of Hospitals of Greater New York¹ listed as its first condition for meeting the responsibility to the patient: "the services of the physicians and surgeons best qualified to diagnose and treat disease." If this means the designation by the hospital of the surgeon or physician who is to render the service to the patient, it is stating a condition that practically does not exist, and is never likely to exist to any appreciable degree. The patient will select his own physician and surgeon, and such surgical and medical assistance as the hospital will provide must be supplementary—and under the direction of the physician or surgeon in charge of the case. And so far as this service to the patient goes it is covered in the provision for trained personnel, efficient organization and the best equipment and conditions.

The Major Community Hospital Problem

The major community hospital problem is to provide the necessary conditions as outlined for the sick in the community. How may this be done? When does a hospital have adequate bed capacity? Let us try to analyze this problem more definitely. And first let us clear up a misunderstanding. It is frequently said that there are 755,722² hospital beds in the United States, and the implication is that these are available for the sick in our communities. In the first place, these are not evenly distributed over the United States, and in the second place, the average patient use is 533,133. But more particularly the implication that these facilities are generally available for sick people is misleading. In federal hospitals 53,869 beds are available for the military and naval services of the U. S., and over three hundred thousand, (302,208) are

in state hospitals which are largely devoted to the care of mental and nervous cases, and the tuberculous.

The same is true of figures of bed capacities for local communities, and their distribution in private or public is frequently meaningless because there is failure to recognize the existence of special hospitals that draw from wide areas, such as a tuberculosis sanitarium, a state hospital for the insane or a federal veterans' hospital.

Kind of Bed Capacity Available

Another assumption regarding figures of community hospital bed capacity is that bed capacity is interchangeable. A bed in an asylum for the mentally ill is not available for a sick child, a bed in a tuberculosis sanatorium is not available for a pregnant woman. A bed in a general hospital is not ordinarily available for a person with a contagious disease, a bed in an isolation hospital is not available for an orthopedic case. In other words, we must think of available bed capacity with reference to the specific group of cases for which it is available.

We must think of the community illness problem not in terms of so many sick, but in terms of their specific complaint. Therefore, one of the first things to determine in planning community hospital facilities is the kinds of bed that are necessary. A careful study of the *best* current practice indicates that special provision should be made for the following groups:

1. General illness.
2. Obstetrics, particularly because of the increasing habit of hospitalization for childbirth.
3. Contagious diseases.
4. Nervous diseases.
5. Tuberculosis.
6. Mental diseases.
7. Convalescent.

It may be desirable to make further sub-division, that of orthopedics, but the statement of a community's bed capacity should be stated in terms of number of beds for each of these specific needs.

Facilities Outside of Community Bounds

Considering the problem of the community hospital responsibilities, it must not be thought that the provision for all the specialties should be located in the community itself. The state, for example, has taken over fairly generally, the hospital care of the mentally ill. The state hospitals for the mentally ill and also for the criminally insane must be regarded as part of the community's means for meeting its problem. The problem here will be the adequacy of the state's provisions for state needs. This would, of course, include the county asylums which are part of the state plan. The statements which we are making regarding the local community will apply to the state.

There is increasing tendency for the state to assume toward the tuberculous the same responsibility it assumes toward the mentally ill. Local communities must see to it that the shifting of the authority and control does not result in neglect of these important illness groups. Where states fail in vision or accomplishment, local authority or philanthropy must fill the breach.

Problem of Providing Laboratory Service

Particularly in rural areas, in small hospitals, in hospitals inadequately supported by their community, it is possible to solve the problem of providing for laboratory service outside the community. Laboratory examinations have become an essential part of modern diagnosis. But laboratory facilities cost money and laboratory technicians

1. The Hospital Situation in Greater New York, pp. 337-338.

2. All figures are from the hospital number of the Journal of the American Medical Association, January 12, 1924.

do too, and the supply, particularly of the well-trained and competent, is not over-abundant.

The state laboratory of hygiene or other institutions rendering a similar service has come to fill this important gap in the medical, public health and hospital problem. In certain cases, Wassermann tests are important. These require adequate laboratory facilities, highly trained technicians and a serologist—an overhead that makes such service impossible in the rural areas and in the small hospitals. In the state of Wisconsin this service is splendidly performed by the state at the Wisconsin Psychiatric Institute.

Blood Tests Essential to Diagnosis

Similarly, blood tests are an essential means of diagnosis. Until quite recently these analyses had to be made at the bedside because of effect on time on the blood. Under these conditions rural areas and small hospitals lacked an important means of diagnosis. But the same psychiatric institute, under the direction of Dr. Wm. F. Lorenz, worked out a preservative that will keep the blood for ten days. This brings the benefits of blood chemistry to every bedside of the sick in the state. In outlining a community program, the availability of these services must be kept in mind. Incidentally the more certain technique and the more highly trained interpreters make for better diagnosis, and the large number of cases creates an excellent basis for broadly grounded research.

Community Estimate of Needs

The important question for the community to determine, after its needs for varying types of bed capacity, is how many does it need of each kind. The survey of the community, based on as complete information as is available, must furnish the *basis* of these answers. And the survey must include health and social statistics for some years back. What is the population? Is it increasing or decreasing? How many births a year? How many deaths and the causes of the deaths? What has been the nature and extent of epidemics? What facts are available about morbidity? (The hospital care of morbidity locally and elsewhere for the community.) What is the attitude of different groups toward hospitals? What statistics are available for each disease?

But the experience of other communities must be used—and frequently will be decisive where accurate and complete information is not available. For example, in the absence of better information, a community might estimate its needs on the basis of two per cent of its population, excluding contagious diseases and tuberculosis. Obstetrical cases are not included either. On this basis, in New York there are 120,000 people sick enough to require medical or hospital attention. In a city of 1,000,000 there are 10,000 sick, in a city of 50,000 there are 1,000 sick. This, of course, means every day. Multiplying this number by 365 the remainder is the yearly daily bed capacity required.

Learning from Other Communities

The New York survey is specially illuminating in this point. To estimate the number of beds for obstetrical cases, it was figured on the basis of an average stay of twelve days, one bed can accommodate thirty women in a year, and with birth statistics and the knowledge of the attitude toward the hospital of the community groups, it would be easy to estimate the needs. This will, of course, depend upon whether it is assumed that the mother shall go to the hospital with all her children, which is the ideal condition, or whether she goes only with her first, which

is the socially desirable minimum.

Similarly, in the Framingham report it was proposed that adequate provision for the care of the tuberculous was one bed for each death. If it is known how many deaths were caused by phthises that figure indicates the desirable bed capacity. This, perhaps, illustrates that standards tentatively worked out elsewhere may be set up at least tentatively for guidance, particularly in the absence of more definite local information.

A hospital program is, of course, a long-time proposition. It must take into account future needs and anticipate these as far as possible. One of the facts that must be constantly kept in mind is the rate of a disease. Is it increasing or decreasing? For example, the Metropolitan Life Insurance Company reported that the pulmonary death rate among white males between twenty-five and forty years in 1919 and 1920 was *one-half* what it was eight years before. The same is true of women. Such a fact has an obvious conclusion. Significant in this connection is the statement of the New York survey. "With the exception of the year 1918 the rate from respiratory diseases has declined, the high rate in 1918 being due to the influenza epidemic. There has likewise been a very considerable drop in the death rate from digestive diseases. Statistics also show decreases of various degrees in the death rates from non-venereal genito-urinary diseases, from diseases of childhood, typhoid fever and from external causes." (p. 57.)

So the greatly increasing use of hospitals for obstetrical cases is a similar fact on the other side of our question. For the present generation, the inquiry addressed to them will probably be "In what hospital were you born?" As in obstetrics, so it is in orthopedics.

These facts not only have an important bearing on the bed capacity but on the provision of supplies and equipment.

Bed Capacity and Seasonal Variation

Another factor that must be taken into account, in determining the adequacy of bed capacity, is the seasonal character of disease. This is particularly true of contagious disease. The four contagious disease hospitals of New York showed a utilization of only 31 per cent, but of course that does not mean that at the "peak" the four hospitals may not have been filled. Here is another reason why the statement of bed capacity for a community must be in terms of the illnesses for which it is available. Obviously other illnesses could not be taken care of in the contagious hospitals during the period of even lowest utilization. Provision, of course, must be made for the occurrence of inevitable epidemics. "The incidence of disease is subject to seasonal variation, particularly in such conditions as the respiratory diseases. A hospital may report a low average annual utilization of its bed capacity, yet it may work to maximum capacity at certain times of the year." (p. 71.)

Ten Per Cent of Capacity Unoccupied

The planning of hospital bed capacity in terms of particular use, as already outlined, will save, to a considerable degree, low utilization. To have 30 per cent of bed capacity idle is not unusual, but this idleness need not exceed 10 per cent. There is some time lost between the time one patient uses a room and another enters, for necessary repairs, but this should not, in the judgment of the writer, exceed 10 per cent which the New York report says "may be regarded as inevitable." (p. 72.)

In planning bed capacity, even though the number of beds may be adequate, if all needs of the "bed" were an

interchangeable unit, the important consideration is always that of having the bed available for the particular patient who needs it at a particular time. A private room bed or even a semi-private room bed is practically always available, apart from the question of cost. A ward bed is not really "available" to the private room patient. The larger the ward the less flexible it is, and therefore less able to be utilized. A male ward cannot be used for an overflow of female cases, nor can young children ordinarily go into adult wards. Sometimes the low utilization is due to rules or tradition of the hospital, such as the rule forbidding medical cases of any kind in surgical wards. In a general way, the smaller the ward the more flexible it is as a unit and the higher utilization that can be secured.

We ordinarily speak of a hospital as a 100-bed hospital and we assume that expresses the limit of its capacity. A wise provision has recently been made in some hospitals built by Mr. Grove, an architect of St. Louis, so that, for example, every private room, because of its size and design, can be instantly changed into a two-bed room, and this provision for expansion is made in the semi-private and wards though not, I believe, to so great an extent.

Making Beds Economically Available

There remains a further consideration in connection with the use of hospital beds. What doth it profit a community to provide hospital beds to meet adequately the various phases of its illness problem if the people for whom the facilities exist cannot afford the price? It has been said, even to the point of triteness, that there are two classes that are adequately cared for by present hospital arrangements—the rich and the poor. But the great majority of us who are neither rich nor very poor, find the economic problem serious in the way of ever getting adequate hospital service. With the mounting cost of hospital operation, costs for hospital services (and the medical and surgical services) have been progressively increasing. Naturally other things have mounted too. With 86 per cent of all persons employed receiving less than \$2000 per annum the necessity of meeting the hospital bills, even rarely, may fundamentally affect the standard of living of the person and, in consequence, act as an economic hardship. Fortunately surgical and medical services are not charged in some cases at the regular rates, or at all, but this is accidental, due to the "milk of human kindness" in the individual case. But a community policy cannot be built on such a basis. The repugnance of this group to charity, to free medicine and to public wards, especially large wards, is a psychologic fact that must be taken into account as well as the economic fact.

Fortunately there is an increasing tendency to do this, both by hospitals and by physicians and surgeons. An important part of the duty of the social work department is to discover the economic resources of individuals so that the economic facts can be taken into account. The psychologic fact is more difficult to deal with, but smaller wards and semi-private rooms make it possible to give larger consideration to this fact.

Increasing Popularity of Hospitals

There is still another important tendency that will help solve this situation—and that is the increasing popularity of hospitals. W. E. Henley, not so very long ago, in his *In Hospitals* described the hospital as "half work house—half jail." It was, as a noted French surgeon said, a "chamber of tortures." It was the place to go only as

a last resort. The modern hospital with its highly skilled surgeons, well-trained nurses and technicians, competent auxiliary persons, with its atmosphere of quiet, cheerfulness and kindly service has changed this. People go to hospitals now not as a last but as a first resort for study and diagnosis. Visiting hours help people to appreciate this spirit and this service. The atmosphere of charity is gone, though the tradition of charity still lingers. With the tendency, a clear recognition of the economic problem of the people of moderate means, and the need for hospital endowment, this problem will approach a better situation, though it must be frankly admitted, a solution is far off.

Ambulance Service for Emergency Cases

An important aspect of the medical function of the hospital is the handling of emergency cases. Obviously the patient should receive the particular medical or surgical treatment he needs as promptly as it is possible to give it to him. Consequently operating room and other facilities should always be "ready for service," an anesthesiologist should be on call, provision should be made for promptly calling surgeons or physicians as soon as the need for them is known, and procedure should be so mechanized that the patient is expeditiously handled in the hospital from the moment he reaches it until he receives the necessary medical services.

It is obviously, too, a part of the community responsibility to see that people are brought, in reasonable comfort, to the hospitals as promptly as it is possible to get them there. This is true in emergency cases; it is true in cases of the very sick who have been cared for at home, and hospital treatment is now felt to be necessary, because of educational influence or emergency, and the patient is not able to get to the hospital otherwise, especially in cases of the sick poor.

Where there is one hospital, the problem is simple and need not detain us, but where there are several hospitals scattered over a city and a large area to cover all the possibilities of inadequate service and failure enter. Some of the difficulties in the past have been due to,

1. Failure of hospital to agree to advance as to areas or service.
2. Efficient handling of calls.
3. Distribution of calls, particularly when an ambulance of one hospital is busy.
4. Advance notice to hospital of character of case.
5. Lack of general coordinating authority.

The problem might possibly be handled by a committee of the hospitals of the community with the cooperation of the police department and the local physicians, but more likely in the long run, it will be best handled by public authority acting as a coordinating and cooperating agency between all hospitals, with public funds adequately supporting this hospital service.

The Out-Patient Department

The tremendous resources of hospitals for good should not be confined to people who are seriously ill or who can or must go to the hospital full time to secure its services. Take the special case of chronics. There are many of these of the ambulatory type. If they have adequate means they are taken care of satisfactorily, but there are many of small means who need periodic treatment or examination without being institutionalized. For such classes, the out-patient department furnishes a very satisfactory solution.

The out-patient department makes available to many types of the sick or physically sub-normal the medical and

nursing resources of the hospital. It would be a regrettable thing even to suppose that a hospital should limit its resources to the prostrate or those in advanced stages of illness. The discovery of disease in its incipient stages, and the conditions which make people susceptible to disease are significant phases of the public health problem both in its remedial and in its preventive aspects. The opportunity to educate the patient is just another means for personal service and preventive work of a social nature. There is necessity, therefore, for providing every convenient arrangement possible even to keep open evenings or other times when people are not at work so that they do not lose pay. And obviously, too, every effort should be made by physician, nurse, and social worker to keep the patient under treatment until discharged by the physician.

The possibility of handling such large numbers of patients, and to get them in the earlier stages, which the out-patient department affords, makes its community opportunities and responsibilities at least as important as the more formally recognized services of the hospital. The completeness of this service is dependent on hospital co-operation with the association of charities and the social workers generally—and hospitals generally are recognizing this fact.

The function of the out-patient department has been well stated by the committee on out-patient work of the American Hospital Association and may be here used as a summary statement of its function.

"It is the responsibility of an out-patient clinic to provide correct diagnosis and adequate treatment for ambulatory patients; to instruct its patients so as to assist in the prevention of disease; to aid in investigation of the causes of disease and of methods of treatment and prevention; and to provide educational facilities and useful experience for physicians, medical students, interns, nurses, pupil nurses, social workers, and others concerned with the care of the sick, or the promotion of health."¹

The social importance of this aspect of hospital service must be recognized in the hospital organization. The out-patient department frequently renders the same kind of service to large numbers of the same kind of human beings as is provided in the rooms of the hospital. It must, therefore, be an integral part of the hospital organization under the same general medical, administrative and nursing supervision, with the same ideals as to quality of service, personnel, equipment and consideration of the patient, as has been previously described.

There is one special hospital problem that can best be treated in this connection, and that is the problem of large or small hospitals and their location. Shall the required bed capacity of the community be placed in one hospital, or in one section of the city. The availability of adequate and competent administrative medical and

nursing personnel will naturally influence this decision, but that is not now our major interest. From the social or community point of view much might be said in favor of the smaller hospitals well distributed over the city acting as local community health centers. The New York hospital survey report put the case and the problem well:

"From the point of view of community service it is still a moot question whether a few large hospitals are preferable to a greater number of smaller institutions. The advantage of more small hospitals is that they can be distributed throughout the city, thus also serving through the out-patient departments as local community health centers. But small hospitals are more difficult to provide with proper staffs, and would necessarily be more expensive to administer if they undertook to do the same type of work for which large hospitals are equipped." (p. 42.)

"What doth it profit a community to provide hospital beds to meet adequately the various phases of its illness problem if the people for whom the facilities exist cannot afford the price?"

"Shall the required bed capacity of the community be placed in one hospital or in one section of the city? . . . From the social or community point of view much might be said in favor of the smaller hospitals well distributed over the city acting as local community health centers."

" . . . Doctors' nurses' and particularly social workers' contact with patients in hospital, or in out-patient departments, by instructing patients in the causative and preventive factors of disease, is the principal means of spreading the gospel of personal hygiene and public health."

"The hospital exists to furnish its service to everyone. . . . It is this fact that makes it a community obligation. . . . Should not then, the principles of social insurance of spreading the cost over the entire community with a greater share paid by those who are directly served, be used in financing hospitals? . . . That is the question for every community to face and to accept its responsibility generously."

Hospitals tend to locate themselves in the same neighborhood. Even where it is not possible to determine in advance the size of the hospital, taking into account all the factors, the location of the hospital should be determined to a considerable degree by community factors, taking into account the entire service of the hospital.

An aspect of hospital service that has medical, social and economic significance, is the adequate provision of convalescent homes. While it is not intended that facilities should be provided for all convalescents, there are a large number of cases where it is necessary. The home must continue to be the place where, perhaps, most people convalesce. But where the economic burden of hospital service is great, people could be removed to the less expensive convalescent home, if they were

available and efficient. Purely on medical grounds, doctors could assign patients to convalescent homes, properly equipped. Under existing housing conditions or because of family responsibility, many patients cannot receive in their own home the kind of care or the conditions that would be conducive to rapid and proper recovery.

Community Needs for Intelligent Planning

Intelligent planning of convalescent facilities would relieve the bed capacity of the hospital for larger utilization, would reduce economic burdens of sickness, and might conceivably, in certain types of cases at least, lead to more rapid recovery. Information on this problem is not accurate enough to make definite social prescriptions, but there is need in dealing with this problem by those who have the vision of a community-wide service, to meet the present needs for:

1. A definite community policy of institutional convalescence based on accurate medical and social knowledge.
2. Coordination of existing facilities.
3. Adequate standards for medical, nursing and auxiliary services.
4. Proper equipment for all services including physiotherapy, and occupational therapy.
5. Utilization of recreational and physical exercises on the basis of definite knowledge of its therapeutic results.
6. An efficient placement service.

1. Report, committee on out-patient work, American Hospital Association 1924, p. 2.

7. Capitalizing the opportunities for educating convalescents in personal hygiene and public health.

8. Testing out the suggested standard that a community should provide convalescent facilities equal to from 12 to 15 per cent of its total bed capacity.

In most cases, communities are without convalescent facilities of the right type, or of any nature. In planning their program for the institutional case of convalescents the foregoing facts must be kept in mind. For communities with present facilities the need of the New York situation is typical. "At the present time the outstanding need is a definite community policy with reference to institutional convalescence, a coordination of all the existing activities as well as a formulation of adequate administrative and medical standards." (p. 300.)

Social Service in Hospitals

One of the fundamental conceptions underlying this paper is the integrity of the hospital organization—its unified character. All its services must be *originally* related to all other services. They must find their primary justification in the extent that they promote the care of the sick. Unless social work is an integral part of the hospital organization, unless it catches its spirit and promotes its purpose, it is likely to be dilletante. It will lack real motive and intelligent basis for action, and be without any test of its results. In other words, it will dissipate energy, be in the way of other essential services and, being aimless, will be without results.

Function of Hospital Social Service

The statement of the committee on the survey of hospital social service of the American Hospital Association on the function of hospital social service made in 1920 has not been improved upon and may be set down here as generally acceptable.

"The basis of hospital social service is its relation to the medical care of the patient. The restoration and maintenance of health depend, in many instances, not only on accurate diagnosis and direct medical treatment of pathological conditions of the body, but also upon dealing with the patient's personality, and upon the alteration or adjustment of his home conditions, occupations, habits and community relations. The wise physician understands the connection of social and medical elements and seeks a knowledge of both before determining his final program for treatment. Within the medical field itself, the advance of science requires the physician to call upon specialists in many branches, upon the laboratory and the x-ray, in order that he may be able to secure all necessary data and judgments about his patient. The social worker is called upon to secure facts, and to aid in interpreting them, in order to provide a basis for a plan of treatment which takes into account both the medical and the social elements. The social worker also aids in the carrying out of treatment. The merging of the social work with the medical work is essential to effective use of the social worker. Social treatment must have as its aim the promotion or accomplishment of the doctor's plan of treatment—a plan that has taken into consideration the personal and environmental elements as well as the medical. Entering more into detail, it may be said that it is a primary duty of social service in a hospital or dispensary to assist in the cure and prevention of disease in individual cases by such activities as:

1. Discovering and reporting to the physicians facts regarding the patient's personality or environment, which relate to his physical condition.
2. Overcoming obstacles to successful treatment, such as may exist or arise in his home or his work.
3. Assisting the physicians by arranging for supplementary care, when required.
4. Educating the patient in regard to his physical condition in order that he may cooperate to the best advantage with the doctor's program for the cure of the illness or the promotion of health.

The primary work of hospital social service, therefore, is work with individual patients. In this respect, the work corresponds to that of the medical service of the same institution."

This statement of function of medical social service, as an essential hospital service and an integral part of the hospital organization makes it necessary that the medical social service shall contribute definitely to the four-fold

community responsibility of the hospital, medical, teaching, social, or broadly educational, and research. We shall discuss these functions for the hospital as a whole, but in this connection it may be pertinent because of our special interest in this field to state summarily the possible contribution of hospital social work.

Medical Service of Social Work

One should never get tired of repeating the fact that the hospital exists for patients and to them it owes its primary responsibility. So, too, the social work of the hospital must be judged. The services of medical social work definitely related to the understanding of the patient's conditions and his recovery, are:

1. *By making available to doctor any factors in his environment that have any bearing on his physical condition, thus supplementing medical history by a social history.* This would include any facts of heredity, personality, manner of life, home environment, worry about finances, dependants, character of employment, and strains or hazards incident to it, and recreation, and standard of living generally.
2. *By overcoming obstacles to treatment or recovery particularly in out-patient department and during convalescence.* This would include for patients in hospitals care of situations in homes such as children, dependents, payment of rent and the like. Under this head social workers will see that necessary medical supplies are secured, that social or economic conditions affecting patient adversely are corrected, and that as far as possible a situation favorable to recovery is secured. This last may mean a new job, temporary financial assistance, relieving parent of responsibilities for care of young children, or special assistance with diets.
3. *By arranging for supplementary care of patient.* This is the positive side of the second requirement and has already been treated in that connection. This and the next suggestion to be made will require a utilization of all the available social agencies of the community.
4. *By educating the patient as to his condition, the relation of the proposed treatment to it, and training him in any necessary services, for example, cooking, that are essential to the improvement of his situation.*

Teaching Services of Hospital Social Work

It is essential that social conditions affecting physical conditions, in homes, in factories, and shops, in offices, in the social environment generally, should be understood by the entire hospital personnel. Short courses or regular courses, and medical-social clinics should be given for doctors, nurses, and the younger medical social workers. The social work departments of hospitals are in the best position to cooperate in this work, and it is a responsibility that clearly rests upon them. The doctor, during his internship, should be especially initiated into this field, particularly if it has been omitted in the medical school.

Research Service of Hospital Social Work

The tremendous importance of medical records and their value in revealing the accuracy of diagnosis and treatment will be pointed out later. The social implication of disease and its social causation are fundamental to a health program and, as such, medical and social records must supplement each other and must be studied for the knowledge we will acquire from medical diagnosis and treatment, the social aspects of disease, and of public health.

Social Service of Hospital Social Work

The social service of hospital social work is the broadly educational one of spreading the knowledge discovered by its research, by an efficient use of all the community resources, particularly as they relate to the sick and the convalescent, and by advising public authority of conditions calling for correction under existing laws as they are discovered in the course of its work. As a part of the hospital organization, the social service will naturally call the attention of the superintendent to needs not met by existing services, if the hospital, to unavailability of

services to groups who need them without loss of time, for example, to workmen, or other incompleteness or inadequacy of hospital service as the knowledge of community conditions and needs accumulate, are organized and studied.

Teaching Function of Hospitals

The hospital has long accepted its obligation as an instrumentality for training nurses. It must become, to an even greater degree, a factor in the training of doctors and hospital social workers. In fact, all social workers could profit to some degree by contact with a hospital, by understanding the community function and service of hospitals, and the interrelationship of disease and fundamental social conditions such as poverty, degeneracy, and crime.

The teaching obligation is so clearly recognized in the field of nurses, that perhaps no extensive discussion is needed to emphasize its community aspects, and the necessity of extending or enlarging the hospital service to other groups. The community side of the problem has not always been clearly recognized, nor served as a guiding principle in educational work.

Nursing Education and Hospital Training

Too many hospitals have established training schools merely for the purpose of securing an inexpensive nursing personnel. The principal object was economic, not social, selfish, not altruistic. In fact it looked, in too many cases especially in the smaller hospitals, like exploitation of the probationers. But conditions are improving and the responsibility to the community for sending out well-trained nurses is felt and acted upon. The plan of education is not entirely the older type of apprenticeship of merely learning by doing, but theory is more definitely related to practice. The teachers are being more and more selected with reference both to their knowledge and their capacity to teach and not merely their willingness to do the work, or the fact that they have the time. So educational ideals and community responsibility are finding larger play in the training school for nurses.

Training of Physician and Surgeon

There is general recognition of the place of the hospital in the training of the physician and the surgeon, and under the stimulating influence of the American College of Surgeons, the American Medical Association and the Carnegie Foundation for the advancement of teaching this is on a very high plane indeed, both on the educational and the community side. A decidedly helpful movement is the present emphasis on the need for stressing the educational possibilities of the period of internship. This is indicated, too, by the fact that more and more the university medical schools are themselves supervising this critical year. The detail of the educational program is beside our present purpose.

Training Social Workers

Heretofore, we have indicated the opportunities and responsibility of the hospital in training the medical social worker, and its helpfulness in giving the general social worker some insight into the social origin and social outcome of sickness and disease. To emphasize the opportunity one has but to point out how great the demand is in excess of the supply of trained workers, and the practical lack of facilities for providing training in this field. If it is not done in the hospital, it will not be done at all in most places, and in the few places where schools of

social work exist, it will be very poorly done without the whole-hearted support of the hospital. Moreover, there, a splendid opportunity is given to provide training for volunteer social workers.

Training Hospital Administrators

There is one obvious use of the hospital facilities for teaching purposes not yet utilized in accordance with our best knowledge of professional education—that is, the training of the hospital executive. There is greater realization of the importance of this function, and of the effects on the hospital of competent administration. Thanks to the admirable report of the committee on training of hospital executives, there is more definite crystallization of opinion on this subject and a more general realization of the high opportunity that hospital administration offers for a dedicated social service.

The Old and New Conception

Because of this report we shall give up more rapidly than otherwise the prevalent general conception of "a hospital as a hotel for the sick with the superintendent an exalted steward or clerk, with little voice in shaping policies and less responsibilities in executing them." (p. 17.) We shall come sooner to the truer position stated by the report.

"Such an officer should be able to interpret community needs, the methods to be devised to meet them, the objectives sought, the fundamentals of sound organization and administration, and be able to mobilize and direct the self-expression of diversified activities toward a common goal. The position of the executive must be clearly defined and he must be held responsible and be given commensurate authority for the performance of the duties indicated. The theoretical position of such an executive carries with it a dignity and an influence for good which challenges the highest degree of imagination and ability." (p. 17.)

Cooperative Training by Universities and Hospitals

The training of such men by the present methods of more or less accidental apprenticeship is inadequate for the purpose and is not in accord with our best practice in professional training. Universities will more generally take up the work, particularly after the stimulating analysis of the committee as to need and suggested curriculum. Absolutely essential in such a program is the cooperation of many hospitals for purposes of observation, and for practical work under the administrative direction of the hospital authorities and under the educational supervision of the university authorities.

Training Executives Who Are at Work

Such a cooperative educational program ought to be used, too, for training present administrators. The principle of the short course and summer courses could be utilized to give the present executives the benefits of the research and practical training of this course.

The Research Function of Hospitals

The research function must justify itself in better treatment of patients—and it does. The end-result study which it stimulates, the careful record of history, diagnosis and treatment which it requires, and the efficient organization of staff which it presupposes are all guarantees of continuing interest in the patient, progressive knowledge of diagnostic methods, and therapeutic results and keener observation and ripper knowledge in the physician's daily work. This, of course, means a better hospital organization and routine, and a better community service.

Three Essentials for Research Service

Both for the care of the sick and the needs of research three things are essential:

1. An efficient organized staff.
2. A complete system of records regularly and accurately filled out in connection with the services rendered.
3. End-result study.

Minimum Standards of Service

Hospitals would satisfy these requirements, if they conformed to the minimum standards set up by the American College of Surgeons as follows:

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word *staff* is here defined as the group of doctors who practice in the hospital, inclusive of all groups such as the "regular staff," "the visiting staff," and the "associate staff."
2. That membership upon the staff be restricted to physicians and surgeons who are (a) full graduates of medicine in good standing and legally licensed to practice in their respective states or provinces; (b) competent in their respective fields and (c) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.
3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations, and policies specifically provide:
 - (a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.)
 - (b) That the staff review and analyze at regular intervals their clinical experience in the various departments of the hospital, such as medicine, surgery, obstetrics, and the other specialties the clinical records of patients, free and pay, to be the basis for such review and analyses.
4. That accurate and complete records be written for all patients and filed in an accessible manner in the hospital—a complete case record being one which includes identification data; complaint; personal and family history; history of present illness; physical examinations, special examinations, such as consultations, clinical laboratory, x-ray and other examinations; provisional or working diagnosis; medical or surgical treatment; gross and microscopical pathological findings; progress notes; final diagnosis; condition on discharge; follow-up and, in case of death, autopsy findings.
5. That diagnostic and therapeutic facilities under competent supervision be available for the study, diagnosis and treatment of patients, these to include at least (a) a clinical laboratory providing chemical, bacteriological, serological, and pathological services; (b) an x-ray department providing radiographic and fluoroscopic services.

But even though these standards are called minimum standards it will be some time before they are really achieved in the spirit in which they were conceived. We must appreciate their beneficial effect and work for even higher achievement.

A Staff Meeting Should Be a Seminar

The end-result study ought to be a regular part of the staff meeting and the basis of it must be an accurate and complete system of records. So all three items are very closely related. Without a real organization of the staff, and regular meetings, nothing can be done. But with these nothing may be done unless there is a genuine study of the case records, (supplemented by autopsies whenever that is feasible) and not a reminiscent, story-telling smoker, or a mere review of the merely interesting recent cases or a perfunctory passing away of time together, in order to conform to the requirement for a monthly staff meeting. The staff meeting must be conducted on the study of the surgical and medical cases as a seminar where there is the honest question, and the honest criticism, and the give and take of frank discussion.

But even where there is genuine interest in patients, scientific enthusiasm, and desire for conscientious study of experience, the motive power of this interest, enthusiasm and desire is wasted unless the records are complete and accurate records of all the essential facts of the case.

Community Responsibility and Records

The adequacy of hospital medical records is one meas-

ure of the hospital's sense of community responsibility. The research function will be absolutely conditioned on the quality of the record themselves. Though much is done that is not recorded that helps the individual to a degree, the record does not give full information to others serving the patient and it tends to render the records valueless for the improvement of medical knowledge and medical practice. Even in so excellent a situation as New York the committee finds that it is important that the record problem should be stressed. The New York committee says:

"It is, for example, of no little import to find in both complete and incomplete records only one case history in three is measurably adequate, or that only one record in ten has a statement showing an examination of discharge; that as far as the records show, two-fifths of the ward patients are examined by no one but the intern; that only 60 per cent of the diagnosis of malignancy are confirmed by laboratory tests, and that in one case out of every four the nurses entries are the only clue to the progress made between admittance and discharge."

Deficiencies of Records

Even in the better hospital one finds lack of realization of the importance of records in the treatment of patients and to medical research. Some of the more typical deficiencies are:

1. No history of patient recorded.
2. Incomplete history, particularly where significant facts for diagnosis are missing.
3. Notes are too brief or fragmentary or illegible.
4. Incomplete record or no record of physical examination on admission.
5. Record of incomplete examination.
6. Records too brief, uninformative.
7. No record of examination of parts of body affected as given in final diagnosis.
8. No record of physical examination on day preceding an operation—and patient dies from broncho-pneumonia.
9. No record of provisional diagnosis.
10. Provisional diagnosis is not supported by physical findings or recorded history.
11. Provisional diagnosis fails to take account of facts of history or physical examination.
12. Provisional diagnosis differs from final diagnosis, and that from death certificate.
13. Final diagnosis does not include all the conditions which, according to record, seem to be present.
14. Final diagnosis not apparently supported by the record.
15. Lack of test essential for final diagnosis, for example, Wassermann in a syphilis diagnosis.
16. Autopsy diagnosis reveals condition not contained in the record—or in the final diagnosis.
17. Absence of, or meagre progress or bedside notes particularly by physician.
18. Progress notes recorded at infrequent intervals—apparently accidental or whimsical.
19. No progress notes on day of discharge or on day of death.
20. No records of physical examination by any other person than intern.
21. Members of staff do not record findings on examination.
22. Absence, meagre, or no records of laboratory analysis, counts or tests, where these seem vital.
23. Apparent absence of doctors orders and relation of patient's condition to medication.
24. Absence of record of consultation or findings of consultation.
25. Need for uniform terminology of discharge.

Need for Continuing Supervision

These items are listed at length in order to reveal the inadequacy of the records, the absence of a genuine scientific interest, and the consequent evasion of what ought to be a personal responsibility of the physician who uses, as a convenience, the community's provision for the care of the sick. If records were periodically reviewed by the staff organization and studied seriously in staff meetings this fundamental condition in the way of helpful scientific research would be removed. This is the only efficient way the problem can be handled and it is one of the real tests of the service of the staff meeting and its conformity to

the minimum standards of the American College of Surgeons.

Organization Needed to Promote Research

To take up in any detail the problems of staff organization would be beside our present main purpose. But the accuracy and completeness of the records is the basis of determining the character of service physicians are rendering in the absence of any inadvisable detailed inspection of actual service. This must be a factor in determining whether a person shall be continued on courtesy staff or regular staff. The responsibility rests on the hospital to see that the men that use its services are professionally competent and ethical—and this community leads to the problem of closed and open staff, which would lead us too far afield.

The ideal arrangement for a community might very well be that which would give every professionally competent and ethical doctor a hospital connection. From the standpoint of community service, the extent to which any individual is denied hospital connection, to that extent the community plan is incomplete. With such a situation we would have practically all closed staffs, an arrangement toward which we are moving. However, this plan must not lead, from the community standpoint, to denial to a patient a laboratory or other diagnostic service which may exist in one hospital and not in another. There, again, we must keep in mind the fundamental principle that hospitals, laboratories, doctors or nurses are where they are, for one purpose—to care for the sick.

Benefits from the Minimum Standards

If a hospital conforms to the letter and spirit of the minimum standards of the American College of Surgeons it will meet its community responsibility as an agency of medical research in the interest of the community sick.

Educational or Social Function of Hospitals

The fourth function of the hospital we called its social function. By that we meant its broadly educational function as an agency for educating the public on matters of public health. Every contact of doctor, nurse, social worker, visitor, and patient with the hospital should result in carrying its public health message. The doctors', nurses', and particularly social workers' contact with patients in hospitals, or in out-patient departments, by instructing patients in the causative and preventive factors of disease is the principal means of spreading the gospel of personal hygiene and public health. The careful review of the medical cases, the comparison of provisional and final diagnosis, the causes of the differences, the therapeutic effects of treatments and drugs are all making the doctor a wiser and more efficient agent of public health

both in its remediable and in its preventive aspects. The correlation of the social worker's data with the medical record, and a careful review of this in staff meetings gives an insight into the social origins and social results of disease that will make the doctor not merely a better doctor but a better citizen. The intelligent spreading of the helpful information developed in the course of its medical research and teaching services, will add to the hospital's usefulness in the community.

Relation to General Public

However, there is another aspect of the community relation of the hospital that has been reserved for treatment in this place, that is, the relation to the general public. No matter under what auspices a hospital is organized, it stands ready to render its services to the public at large. It welcomes the public's cooperation in the way of contributing to its endowment funds or its operating funds, either directly or through community chests. The public responsibility for the support of hospitals is clear, whether they are governmental or private, so long as they render a community service and are essential to the community program.

The greatest responsibility of the hospital is to see to it that the public is adequately informed as to its stewardship for funds and as to adequacy of service. This information of the general public comes from incidental publicity in news-

papers, sometimes by advertising bulletins, and by annual reports. The annual reports will here be taken as typical of this responsibility for adequately informing the community and to secure, in return, community understanding and cooperation.

The obvious fact is that many, many hospitals either do not feel any sense of responsibility for informing the public, or do not know how it can be done, for many hospitals do not issue any reports whatever, or issue such anemic reports that they had better not be issued. The clinic on hospital reports conducted in recent numbers of THE MODERN HOSPITAL indicated many of the deficiencies of this report and is an evidence of increasing recognition of the importance of the subject of report making.

The Situation in New York City

The Survey of the Hospital Situation of Greater New York has an illuminating comment.

"Another feature of hospital articulation which may be mentioned in this connection is the annual report. As published by the majority of the institutions, these are peculiarly uninforming and uninteresting products. It does not seem to be clear to those responsible for the reports as to just what purposes the reports are to serve. If they are to carry a message to the general public of the work of the hospital, they are not couched in language clear enough and interesting enough to attract the attention of the average reader or hospital contributor. However, they contain a great deal of matter of the nature of a name index. If, on the other hand, they are designed

Epilogue

The hospital has many and varied social ramifications. It is *par excellence*, a social institution. It is one of the great works of mercy. Men and women, the sister of charity and mercy, and the deaconess, have solemnly dedicated their lives to its great purpose. Lay people, with something of the spirit of religion, everywhere find in it their greatest opportunity to serve their fellow man. It is taking on a new atmosphere and a new purpose. Losing its augural connection with workhouse and jail, and its limitation to the indigent poor, it has become an institution serving all the people in their hour of need. The main question always is "What service can be rendered?" not "How much can you pay?" Baptised in this new social spirit and confirmed by the social beneficence of its ministrations, the modern hospital is just undertaking social service of a constructive and reconstructive character that only a few years ago would have been called a dream. But yet we trust that the conception here presented will help the day when there shall be a new earth—if not a new heaven.

for those particularly interested in hospitals, they do not contain enough. The statistics, financial and otherwise, are not standardized and are often haphazard. Anyone endeavoring to obtain a picture as to what is being done in hospitals of this city—what types of cases are being treated, what surgical operations are being performed, what are the immediate and end-results, how many of the cases in certain types of diseases receive medical or surgical treatment, what are the occupations, ages, and sexes of the patients treated for certain conditions—will be sorely disappointed if he tries to obtain it from the annual reports. Some hospitals issue reports of a more constructive nature than others. One prominent hospital in this city in its annual report gives many kinds of information, but does not publish reports from any of the medical or surgical departments. In other words, that which constitutes the core of hospital work is omitted." (p. 165.)

Deficiencies of Reports

The failure to reach the public is often due to the form of the reports as well as to its contents. Some of the more common defects in form may be listed:

MECHANICS

1. Unattractive cover
2. Crowded page or chart
3. Poor typography
4. Small type, hard to read
5. Absence of photographs
6. Too few photographs
7. Poor cuts.
8. Too few graphic charts
9. Not enough graphic charts
10. Too much undigested statistical matter
11. Poor paper, ink and binding
12. Lack of good subheads
13. Poor or no title page
14. Poor binding
15. Poor proofreading.

STRATEGY

1. Not addressed to right audience
2. Not addressed to particular audience
3. Not taking account of local situation
4. Not definite purpose
5. Not well organized
6. Not definite in conclusions
7. Not convincing
8. Not interesting
9. Not concrete or specific

JOURNALISM

1. Poor lead
2. Lacks human interest
3. Lacks drive
4. Poor close
5. Poor editing
6. Needs boiling down
7. Needs stories, illustrations, incidents, live matter
8. Pedantic style
9. Too much editorial matter.

Excellent Suggestions for Content

As to content, the skeleton suggestions of Dr. Carl E. McCombs in *THE MODERN HOSPITAL*¹ would immeasurably improve present practice, if generally accepted; they are:

1. A statement of what the hospital's purpose and program is, that is to say, what those responsible for hospital administration regard as its proper sphere of service. This statement might well include a summary of the history of the hospital's development.
2. A statement showing how the hospital is organized and equipped for public service and, if it is not adequately organized and equipped for its purposes, what more it needs.
3. A statement showing how the hospital is financed and how it spends its money, what it owns and owes, and what additional funds it needs to carry out its desired program.
4. A statement of the numbers and other facts about patients cared for, their diseases and injuries, and what was done for them. Typical case "problems" and their solution through medical or surgical care, social service relief, etc., might well be used for purposes of illustration. The importance of efficient hospital service in the promotion of community health and welfare should be clearly brought out.
5. A statement telling citizens how the hospital's service may be about the dietary, the rules governing patient's conduct, visiting, etc.

¹Sept. 1924, p. 240.

If wider cooperation of citizens is wanted, the citizen should also be told how he can help financially and otherwise.

6. An acknowledgment of special service rendered the hospital by professional or lay individuals or groups.

Information and Public Support

A word, perhaps, may be said in this connection about the finances of the hospital. It is the general public that must support the hospital. Where public authority through public taxation supports the hospital the problem of support is not settled but is in the way of solution. There is just as great a necessity for informing the public here as to stewardship of funds and services as there is in the philanthropically supported hospitals. Public opinion must, in the last analysis, be the basis of public taxation.

It will be necessary that the effective public opinion should be informed when the demand comes for more adequate or for increased service.

The private hospital, so called, is a public institution in a very real sense. It has all the community obligations of the public hospital. It must, as a matter of imperative social duty, find its place in the community program and help reinforce all the other agencies. It must inform the public as to its stewardship and funds exactly as does the public hospital.

Should Hospitals Be Supported by Fees?

The special point that I wish to emphasize here relates to the support of hospitals. The community service of hospitals has been emphasized and the correlative community responsibility for support. To a surprising degree hospitals are largely supported by fees for services. In the last analysis this means that hospitals are supported by the sick. They are, in other words, supported by people who are least capable of supporting them, at a time of lowest ebb.

The nearest parallel to this situation is in higher education. While there is a somewhat larger proportion of support coming from student fees to meet the increasing cost of higher education, the proportion in 1920 was 54.2 per cent for student fees and other sources. Over 27 per cent was endowment or productive funds and over 14 per cent was current private benefactions.¹

The Principle of Social Insurance

Why should not the people who receive its services support the hospital? Is not that fair and just and right? Perhaps, but let us see. The hospital exists to furnish its service to everybody, to you, to Tom, Dick, or Harry. Suppose you go out this morning in your automobile and are injured. Without question you are carried to a hospital and given immediate attention—and no question asked. This is true of your wife, your children, your mother, or, if you have them, your employees. The readiness to serve may mean the saving of your life. It is this fact that makes it a community obligation. And to come to the point directly, should not then the principles of social insurance, of spreading the cost over the entire community with a greater share paid by those who are directly served, be used in financing hospitals, whether the money is collected by public taxes, community funds, or in other ways? That is the question for every community to face, and to accept its responsibility generously.

Endowment

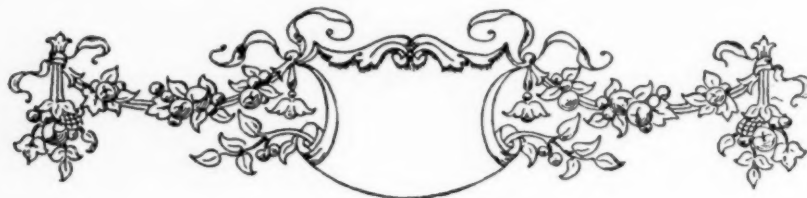
While there are some hospitals with considerable en-

¹For a helpful discussion of this whole problem see Trevor Arnett's *College and University Finance*.

dowment, a larger per cent of hospitals have small endowments or none at all. We have not established among our well-to-do any habit of giving generously to hospitals for endowment purposes. Our private institutions of higher learning are, as was noted, receiving approximately one-fourth of their income from endowments.

The appeal which the care of the sick makes to the generous and the humanitarian is ordinarily stronger than the

appeal for educational funds—but the appeal is not made,—and it must be made. Why should we not aim at the present achievement of educational institutions for an endowment which would produce one-fourth the hospital's income? Perhaps that might be the solution of securing hospital service for the bulk of our population, the people of moderate means, at a price within their means.



NEW SOLAR TREATMENT PORCH FOR CHILDREN, NATIONAL JEWISH HOSPITAL FOR CONSUMPTIVES

By H. J. CORPER, M.D., DIRECTOR, RESEARCH LABORATORIES, NATIONAL JEWISH HOSPITAL FOR CONSUMPTIVES, DENVER, COLORADO.

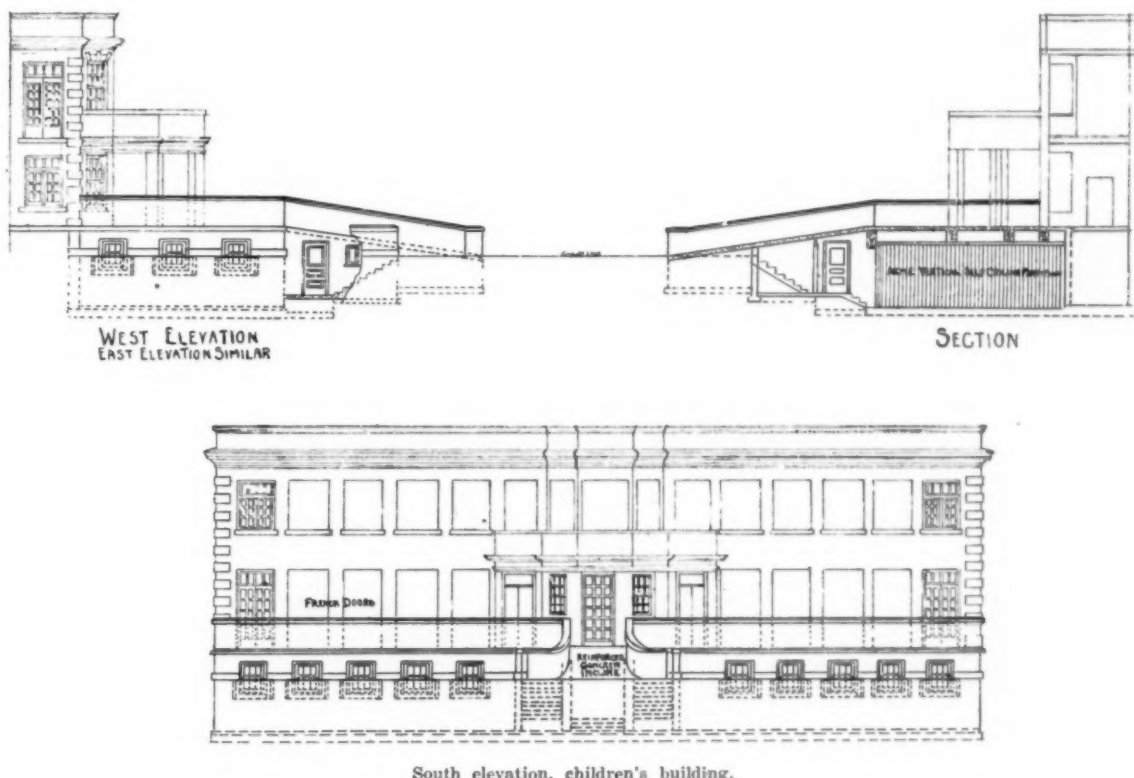
THE universal acceptance of the value of graded heliotherapy as a prophylactic and as a therapeutic measure, not to mention the importance of sunlight in regulating bodily metabolism both of the growing and adult organism, has wrought numerous profound changes in modern hospital construction. The building requirements of today, in many cases, have not fully met the needs of tomorrow, so that buildings seemingly ample for yesterday's needs have had to be modified or elaborated upon with the acquisition of means.

In 1921, S. Pisko¹ described the then newly equipped and just completed Hofheimer children's building of the National Jewish Hospital for Consumptives, pointing out the interesting and essential features of this building and the purposes to which this humanitarian gift was to be put. This was the first free tuberculosis preventorium and children's tuberculosis hospital

During favorable weather sun treatment is given the children either while resting in beds on the new sun porch. The more hardy of them are permitted to play in the sand of the play grounds or romp around the play grounds in trunks. Another feature of the sun porch is that it provides cool outdoor sleeping facilities for the hot summer months, conveniently and accessibly situated, connecting with the wards by means of large double French doors so that the beds can be easily rolled out. The floor is slightly inclined to supply ample drainage and is covered with Western Elaterite to obviate the excessive heat retention and reflection occurring with concrete during the hot summer days.

Construction of the New Building

The new addition to the children's building is entirely of reinforced concrete construction and consists of a



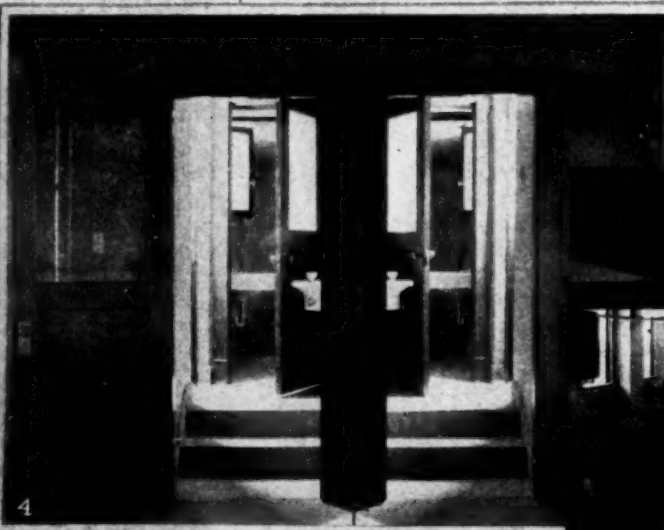
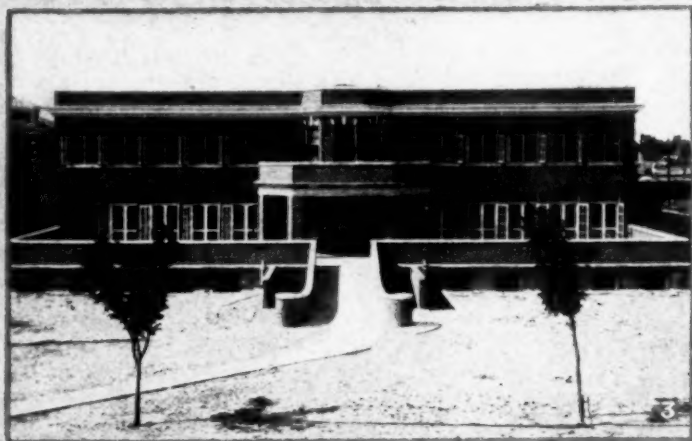
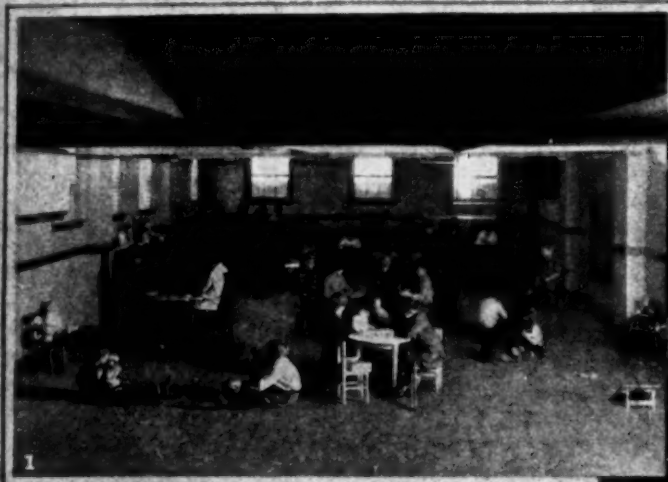
South elevation, children's building.

established in the Rocky Mountain region. It purposes to offer facilities for the children of poor tuberculous parents—a class of Turban's *Prophylactiker*—and for those suffering from the ravages of tuberculosis. In spite of the excellent construction and equipment of the building itself, there was a striking lack of adequate porch facilities for sun exposure and there had been no adequate provision made for the play and recreation of the children during inclement weather or during the periods between sojourn in the sun.

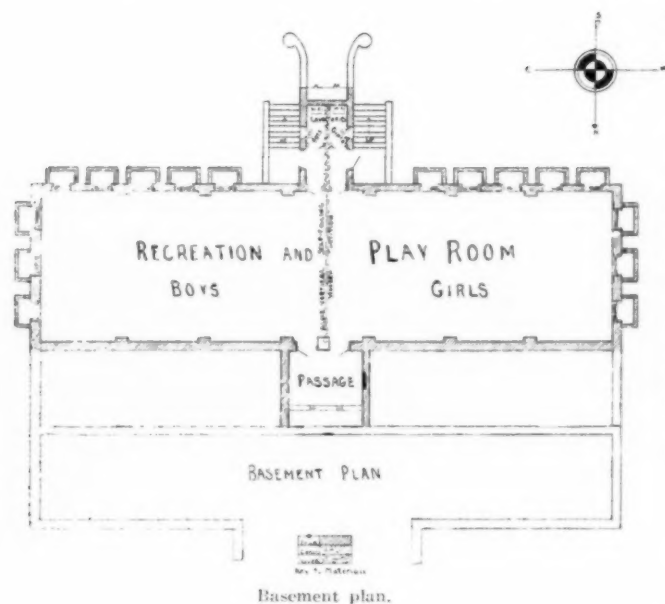
1. Pisko, S. The New Children's Building of the National Jewish Hospital for Consumptives. *THE MODERN HOSPITAL*, 1921, xvi, p. 404.

large south exposure concrete porch approximately ninety-five feet long and twenty-four feet wide with a three and one-half foot high, solid concrete wall, and a central incline about seven feet wide and twenty-four feet long, leading to the children's playground from the porch. Under the concrete sun porch provision has been made for a large recreation and play room for the children. This room, a full basement under the sun porch, ninety-five by twenty-four feet in dimension, is so arranged that it can be used in its entirety or it can be divided by means of a centrally located vertical self-coiling wooden partition into a separate recreation room for the boys and girls, with

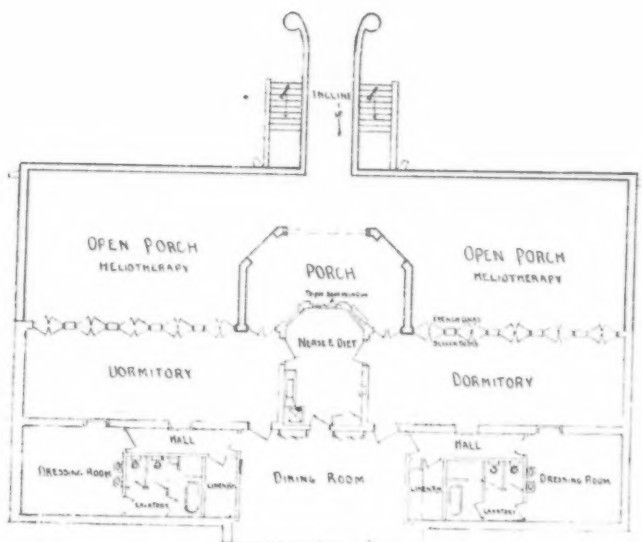
INTERESTING FEATURES OF THE NEW CHILDREN'S BUILDING



(1) A view of the playroom as it looks when occupied by a group of children; (2) a group of children receiving heliotherapy treatments on the new sun porch; (3) front view of the children's building; (4) boys' and girls' lavatories on either side of the recreation and play room; (5) another view of the children's playroom.



Basement plan.



First floor plan.

separate toilet facilities and separate passage ways into the basement of the building proper, by means of a well-lighted staircase, out onto the children's play-grounds. The play room is completely furnished with the most up-to-date designed equipment, including games, toys, and amusements suitable for children ranging from four to sixteen years of age.

INTERNATIONAL GUILD OF NURSES PLANS ANNUAL CONFERENCE

Plans are being made for the annual conference of the International Catholic Guild of Nurses which was organized last year preceding the annual conference of the Catholic Hospital Association. The meeting this year will again be held at Spring Bank, Okauchee, Wis., probably the last week in May and the first week in June.

Tentative arrangements are for the conference to open Sunday, May 24, on the evening of which date will begin a three days' retreat. Following the retreat, the regular sessions of the meeting will begin on Thursday, May 28. The first day will be given over to the reports of committees and the election of officers. The remainder of the

conference will be given over to papers and discussions by graduate nurses. The theme around which the papers and discussions will center will be nursing opportunities. At the conclusion of the conference an appropriate patriotic program will be given on May 30.

Up to January 1, 1925 the guild numbered 378 active members from the various states of the United States, Canada, and several from the British Isles.

Among the opportunities which are being planned for members of the guild is that of establishing scholarships for lay nurses at the new college of hospital administration, Marquette University, Milwaukee, Wis.

More detailed information as to the plans of the guild may be obtained from Miss Kathryn McGovern, R.N., president, or Father E. F. Garesche, spiritual advisor.

REVENUE ACT OF 1924 DECREASES INCOME TAX

All hospital personnel are urged, before making out their blanks, to study the present status of the income tax as revised by the revenue act of 1924. The following explanations include all the changes in regard to exemptions, according to the new act.

The exemptions under the revenue act of 1924 are \$1,000 for single persons and \$2,500 for married persons living together, and heads of families. In addition a \$400 credit is allowed for each person dependent upon and receiving his chief support from the taxpayer, if such person is under 18 years of age or incapable of self-support because mentally or physically defective.

The normal tax rate under the revenue act of 1924 is 2 per cent on the first \$4,000 of net income in excess of the personal exemptions, credit for dependents, etc., 4 per cent on the next \$4,000, and 6 per cent on the balance. Under the preceding act the normal tax rate was 4 per cent on the first \$4,000 of net income above the exemptions and credits, and 8 per cent on the remaining net income.

The revenue act of 1924 contains a special provision for reduced taxes which did not appear in previous laws. All net income up to \$5,000 is considered "earned income." On this amount the taxpayer is entitled to a credit of 25 per cent of the amount of the tax.

For example, a taxpayer, single and without dependents, may have received in 1924 a salary of \$2,000 and from a real estate transaction a profit of \$3,000. His total net income was \$5,000. Without the benefit of the 25 per cent reduction his tax would be \$80. His actual tax is \$60. From his net income of \$5,000 he is allowed a personal exemption of \$1,000; the tax of 2 per cent on the first \$4,000 is \$80, one-fourth of which, or \$20, may be deducted.

WOMEN'S HOSPITAL DONATED TO INDIANA UNIVERSITY

A new women's hospital is to be donated to Indiana University through the \$250,000 gift of Mr. and Mrs. William H. Coleman, Indianapolis. The hospital will be located on the medical school campus at Indianapolis and will be used principally for lying-in patients. The Coleman gift is in the form of a memorial to Mrs. Suemima Coleman Atkins, daughter of Mr. and Mrs. Coleman. The present session of the Indiana legislature is expected to accept maintenance of the hospital. This hospital will afford the gift and to pass an annual appropriation for the needed additional facilities for the training of nurses at the university in this branch of medical service.

THE AUTOPSY AS AN ESSENTIAL TO THE PROGRESS OF DIAGNOSIS IN MEDICINE

By LOUIS J. FRANK, SUPERINTENDENT, BETH ISRAEL HOSPITAL, NEW YORK, N. Y.

THE study of nature is an irksome task, requiring much patience and labor to derive the knowledge upon which to formulate clearly, concisely and succinctly the laws which Nature herself observes and may not transgress. We must delve deeply, defying the decision of the ignorant, overcoming the superstition of the credulous, conquering the antagonism of the obstinate—in order to bring forth the pearls of truth which Nature keeps hidden in far away nooks and crannies in such unprepossessing surroundings.

One can make no progress in industry, no finding in the physical world and surely no discovery in the treatment of disease without much patient investigation. The glamor and cleanliness of the work in the laboratory is only in the layman's imagination. Before a secret is wrested from Nature's closed recess, one has to work with very unclean things, risk the inhalation of poisonous fumes, venture knowingly to experiment with dangerous germs and foul diseases. But one must work faithfully, truthfully, without prejudice, without preconceived notions. For the enticements of Falsehood are difficult to overcome and Truth, sometimes too modestly, hides from our gaze and puts many obstacles in our path before we can find her.

Efficiency Measured by Refinement of Care

The efficiency of a hospital is directly proportionate to the refinement in care which the hospital offers to the patient. By this we mean first, that the malady shall be correctly diagnosed; second, that this diagnosis be made at the earliest possible moment and finally, that such treatment shall be instituted as shall restore the patient to as normal a condition as possible in the shortest space of time.

The lay person does not as yet sufficiently understand that the treatment of disease is one of the easiest branches to learn in the practice of medicine. There is no longer that mystery with which it was surrounded in years past; its principles are based largely upon common sense and experience; its rules are comparatively simple and readily understood. Indeed, it may be safely said that few patients ever die as the result of bad treatment alone. Bad treatment is only bad when the patient is treated for a disease which he never had; in other words, the mistakes in the treatment of the sick are due almost entirely to mistakes in diagnosis. This essentially is the most important attribute that distinguishes the good from the bad physician. That physician is the best who most often and soonest makes the correct diagnosis; so that, in the last analysis, the efficiency of a hospital is entirely dependent upon the ability of its attending physicians to make accurate and prompt diagnosis. Without proper diagnosis, it is sometimes better for the patient that he had no physician and that he had allowed Nature to take its course, for obviously to treat on a false premise is to add insult to nature and to prevent proper healing from taking place.

Autopsy—The Positive Check on Diagnosis

Now the ability to diagnose means the ability to foretell the appearance of the organ or organs that are affected. All diseases, with few exceptions, are the result of changes

in the structure and therefore of the function of the various organs of the body. Each organ of the body may be affected with a variety of diseases and each variety has its own characteristic appearance, peculiar to that particular disease and no other. So that by examination of a diseased organ one is enabled to say whether or not the diagnosis during life was correct. As a matter of fact, this examination of diseased organs or, as we term it, autopsy, is the only positive way of saying whether the patient was suffering from the disease for which he was treated during life. For, while the signs and symptoms of the disease may have enabled the physician to be reasonably certain of the diagnosis the final proof is entirely the result of a post-mortem examination. Nor is this all; incorrect diagnoses are not only the result of misunderstanding of the nature of a disease, but also of errors in deciding which organ or organs are affected. For instance, heart disease not infrequently gives signs that are most prominent in the lungs; some diseases of the liver give symptoms and signs of stomach disorder; diseases of the kidney may give signs of intestinal trouble. Involvement of the lungs may sometime give symptoms pointing to the appendix, which may induce a surgeon intrepidly to remove the supposedly offending organ and at the same time sign the death warrant of the patient, and so on. Very often, on the other hand, a patient may be afflicted with two or more different diseases either in the same organ or different organs; or a single disease may affect two or more important organs; and it is by no means uncommon to find a patient being treated for a disease in a particular organ, when at the same time he is afflicted with another equally serious malady either in the same organ or in a different organ.

Autopsy Study Essential in Learning Diagnosis

For these reasons, the basis of all diagnosis is the study of pathological anatomy or the science of diseased organs. No physician can ever hope to become a capable diagnostician unless he is fully acquainted with the appearance of diseased organs at autopsy. Indeed, the physicians who have acquired the greatest name as diagnosticians are almost exclusively those who have spent the greater part of their earlier medical career in the autopsy room as pathologists. To mention a few; Osler, who recently died, was pathologist to a Montreal Hospital before he entered medicine. Janeway of our city, was pathologist to Bellevue Hospital for a number of years; Delafield was the pathologist to numerous New York City hospitals, and Halsted, late professor of surgery in Johns Hopkins University was pathologist to Bellevue Hospital about thirty-five years ago.

Now a knowledge of pathological anatomy enables one to become a better diagnostician because he has found through experience that certain signs and symptoms which the patient showed during life are associated with certain appearances of the diseased organs at death. As a matter of fact, our entire knowledge of disease as it reveals itself in the living body is due entirely to the study of pathological anatomists. Indeed, up to the time when the performance of autopsies became a matter of routine study (about the beginning of the nineteenth century) there

was very little of real diagnosis in the practice of medicine. Diseases were very obscure things and were surrounded by magic and sorcery. The study of disease was largely a matter of theory and speculation; patients were not treated for a disease, but for symptoms.

What Autopsy Has Done in Decreasing Mortality

It was largely due to a Frenchman named Laennec, the discoverer of the stethoscope, that we owe our present methods of diagnosing disease of the heart and lungs. He listened over the chest and heart and heard certain sounds, and it was only by seeing the appearance of the lungs and heart in the autopsy room that enabled him to say what these sounds meant and so he was enabled to determine what diseases we should expect to find if we heard this sound again. Again it was an Englishman, named Bright, who discovered that all varieties of dropsy were not alike, as had been considered for centuries, but that certain dropsies which gave definite signs and symptoms during life were due to a certain variety of kidney disease. This variety of dropsy is now called Bright's disease. This discovery helped physicians enormously in the treatment of dropsies, so that instead of treating all varieties alike, as had hitherto been done, with obviously, the most uncertain results, each form of dropsy could be given its own particular form of treatment. Thus, countless lives were saved simply by studies conducted in the autopsy room. One of the greatest benefactions that has ever been conferred upon humanity is of the discovery of the infectious origin of child-bed fever.

Up to the time when a Hungarian named Semmelweis made this discovery, the deaths of women from blood poisoning after child birth was terrific; in some hospitals 50 per cent of the women died; thousands of women died every year. Semmelweis' discovery was the result of his experiences in the autopsy room; for he found that at autopsy the organs of the mother who died of child-bed fever resembled exactly those of patients that had died of blood poisoning due to other causes. He therefore assumed that the mothers must have been infected in some way, but this conclusion was that the blood poisoning was carried directly by the hands of the attending physician. He therefore advised strict cleanliness. As a result the number of deaths from child-bed fever dropped to a fraction of what it was, and today, such a death is a rare occurrence. It is not too much to say that this discovery, the result purely of autopsy experience has saved more lives than have been killed in this war.

Another great discovery that could never have been possible except by performing post-mortems was the dis-

covery of the origin of inflammations within the abdomen as due to appendicitis. Before this discovery, the disease was called "inflammation of the bowels," and numberless patients died because no better diagnosis could be made and because our methods of operation were very crude. It is less than forty years ago that an American named Fitz discovered, in patients dying of "inflammation of the bowels," that in nearly all the disease was due to an inflammation of the appendix. With improved methods of operation, this discovery has since saved many lives.

These examples of life-saving discoveries in medicine, which were only possible through the making of autopsies,

might be multiplied manifold. The progress of medicine is the progress of pathological anatomy. Without this method of studying medicine, the practice would have been but little further advanced than it was 100 years ago.

Owing largely to religious prejudice and our restricting laws, autopsies in this country are not easily obtainable, so that the percentage of autopsies in this country is the lowest of any of the great countries of the world. In Germany and Austria, on the other hand, a state law permits an autopsy upon every patient who dies in one of the public hospitals. This is perhaps the principal reason why medicine reached such a high state of advancement in these countries. For years, the ablest diagnosticians in the world were the leaders in the medical universities of Berlin and Vienna; their pathologists were among the greatest, if not the greatest, the world has ever known. As a consequence, these schools at-

tracted physicians from all countries and up to the present war, were the two greatest medical centers. The dream of American physicians has always been to make one of our own great cities, New York, for example, one of the medical centers of the world, but unless a greater opportunity is afforded our pathologists to study disease at the post-mortem table, this realization, I fear, will never be completely fulfilled.

Medical Advancement Dependent Upon Autopsies

To sum up, it may be said that we can make little advance in medicine unless we study the bodies of the dead. Unless we discover what had truly ailed the body of the departed one, we can learn little how to recognize a similar disease in another suffering individual, and thus, perhaps, be able to relieve him. In this way the dead man sometimes accomplishes the greatest boon to mankind, for with his affliction and with his demise he may help to benefit and cure those who live and are likewise afflicted. Thus to the altar of science, the living man bequeaths what is mortal in him. They who are religious and who believe

Jewish Aversion to Autopsies

"THE progress of medicine is the progress of pathological anatomy. Without this method of studying medicine, the practice would have been but little further advanced than it was 100 years ago."

"... The examination of diseased organs or, as we term it, autopsy, is the only positive way of saying whether the diagnosis during life was correct. . . . It is the only positive way of saying whether the patient was suffering from the disease for which he was treated during life."

"Orthodox Jews are, at the present time, it seems, interdicted from the performance of autopsies. This is based on an ancient ruling of the rabbis of the Talmud who judged of conditions as they existed before the fall of Rome and before the era of scientific investigation."

"It is true that there was a time when Christians did not permit necropsies. . . . But Christians now perform and, in fact, recommend that autopsies be performed. This liberality on the part of Christian theologians has helped much to further our knowledge of anatomy, pathology, physiology and other related sciences."

"In all civilized lands, nowadays, necropsies are compulsory in certain instances, and to be against them is to accomplish double mischief, first against the state, and secondly, against the individual."

in the immortality of the soul can find great consolation in this posthumous benevolence, for if sins are forgiven, they who sacrifice themselves for the good of others must surely find forgiveness.

Religious Interdiction of Autopsies of Jews

Orthodox Jews are at the present time, it seems, interdicted from the performance of autopsies. This is based on an ancient ruling of the rabbis of the Talmud, who judged of conditions as they existed before the fall of Rome and before the era of scientific investigations. This ancient decision is not the final one. It is man-made, and therefore, may be an error. Conditions may have arisen and we shall endeavor to prove that they have arisen—which entirely destroy all the foundations upon which the wise rabbis of yore based their opinion. They who seek progress must always remember that the younger generations know truth more truly, recognize wisdom more broadly, than did their ancestors.

We shall assume that those who read this agree with us that the study of the dead is beneficial for the development of knowledge and will help in the treatment of living sick human beings. We shall also assume that such individuals, while granting us the above convention, are unwilling to go against the opinion of the orthodox rabbis unless such opinion is changed and the rabbis become convinced that the arguments that existed against autopsies in the olden times no longer hold, so that they will rule differently. It is the purpose of this paper to plead with the rabbis and present to them the following reasons for the abolition of the interdiction of autopsies on Jews.

Ancient Arguments Against Autopsies

The ancient law makers of the Jews advised against the performance of autopsies, because

- 1—It showed a lack of respect for the dead.
- 2—Christians did not allow it.
- 3—The body of the dead was mutilated.
- 4—One could learn all one wants from animal dissection.

1. What is meant by respect for the dead? No one has more respect for the dead than the properly qualified physician. The cadaver to him is the casket which has been just deprived of its precious jewel—life. He no more thinks it lacking in veneration to look upon the nude dead, than he would think it improper to gaze upon the naked living. Only physicians do autopsies upon the dead, and they are so trained that they do all with a truly reverential and scientific spirit. Surely their hands and eyes are no less disrespectful towards the dead than the touch or gaze of the ignorant washermen or women who prepare the body for burial.

No one can say that cutting of the dead is a very agreeable task. We do it in order to multiply our knowledge and thus be able to do good to others that are sick. Instead of commending this altogether altruistic spirit, the orthodox rabbis are forced by the ancient ruling to condemn it, and thus an incongruous situation arises, that Jewish physicians sacrifice their allegiance to their religious preceptors in order to further the good that they possibly can do the sick and the suffering.

2. It is true that there was a time when Christians did not permit necropsies. But in what way is this an argument for Jews not to have permitted it then? The contention of the rabbis was that autopsies should not be performed because *even* Christians do not allow them. To the ancient rabbi the ungentle gentile of those days was on a lower intellectual and cultural level. The fact

that *even* these gentiles prohibited autopsies—people who otherwise were carnal and brutal and blood-lust—seemed an argument against the performance of necropsies.

Superstition Retarded Necropsy Practice

But this argument has two great fallacies. First,—the Christians forbade the practice under discussion not because they considered it as more unkind than cutting of the living (in which occupation all people of those days took particular delight), but because they were superstitious (as all people were of that time) and were more afraid of the dead than of the living. To the ignorant man of those days, and we fear, of the present time, resurrection means the awakening of the body in its entirety, and to lack an organ or member of the body when buried would prove uncomfortable in the time of the Last Judgment. Thus, we see even now certain people anxious about burying a leg of theirs that has been amputated. Human beings, of all animals, have the great gift of self-deception. If they would but reason, they would know that the millions of worms in the ground play havoc with the body tissues and reduce to an unrecognizable substance the thing that once was human, "Alas, poor Yorick!"

But the second argument against the conception predicated under this decision is still more strong. Christians now do perform, and in fact recommend that autopsies be performed. This liberality on the part of Christian theologians has helped much to further our knowledge of anatomy, pathology, physiology and other related sciences. In some of the largest Christian European hospitals, necropsies are made on all cadavers. It is current practice amongst gentiles to embalm their dead which, to all purposes, is a necropsy performance. This argument of the rabbis, therefore, does not hold now.

Necropsy Not Worse than Surgery

3. The mutilation of the dead by an autopsy may not be any more than the mutilation by a surgical operation. Nowadays it is quite a frequent operative procedure to amputate a leg, to remove a stomach, to resect the appendix, to cut out almost all the female generative organs, to remove a kidney, to take out the spleen, etc., and no one considers such an operation disrespectful or harmful to the body. In fact just the reverse. If it were not beneficial, the surgeon would surely not desire to perform such a serious surgical operation. It is in fact very desirable to remove certain tumors from the body. The tumors are sometimes of such size that it is almost like removing the body from the tumor. Now such a growth is a neoplastic parasite on the body. It is not the body. Yet, according to the sophistry of the ancient law, to cut out such a foreign parasitic tissue from the body after death is considered a mutilation of the corpse whereas, logically speaking, it is taking away something that does not belong there.

I have already referred to the fact that germs do much more damage than all the pathologists' knives can do, yet burial is not considered a mutilation of the cadaver. In the idea of resurrection after death, did the thought arise to what state or period of life is the body to be resurrected? To the mewling stage of infancy, or to the period of man's most firm and ripe years, or to the decrepit complaining state of senility? For age plays the scurviest tricks with our bodies and mutilates them irretrievably. The question remains then, if a man dies old, how shall he be awakened?

In all civilized lands, nowadays, necropsies are com-

(Continued on page 157)

AN APPRECIATION OF DR. WALTER E. FERNALD

AN ANNOUNCEMENT of the death of Dr. Walter E. Fernald on November 26, 1924, appeared in our January issue, page 102. A brief account of his life and achievements is here given.

Dr. Fernald was born in Kittery, Maine, February 11, 1859, and received his degree of doctor of medicine in 1881 from the Medical College of Maine, Bowdoin. From 1882 to 1887 he was assistant physician at the State Insane Hospital of Wisconsin, Mendota, Wis. In the latter year he married Miss Kate M. Nolan, Janesville, Wis.

In that same year he left Wisconsin and became superintendent of the Massachusetts School for the Feeble-minded, Waverly, which position he held until the time of his death. He was the first resident superintendent of that institution which was built entirely under his direction. This building as well as the farm at Templeton Colony are monuments to his skill as a builder for which he won such wide distinction that during the past twenty years there has scarcely been a building at any institution for the care of defectives in the United States which has not been erected under his supervision.

Perhaps his greatest influence has been as an educator and a psychiatrist. He is conceded to be the first man in the world to instruct the lower grades of feeble-minded in the performance of useful work.

He planned to the last detail a twenty-four hour program to meet the individual intellectual level of each child in the institution. Men and women from all over the world came to see not only the economy and sturdy construction of the buildings but to study his methods of training the feeble-minded. For several years past the school has really been a university for the teaching of people interested in the subject not only in this country but in foreign countries as well. During the past year of his labor, individuals and delegations had been sent from thirteen foreign countries, from twenty-eight states in this country and four provinces in Canada to receive his advice and to be imbued with inspiration from his accomplishments.

He was a lecturer before medical students of Tufts and Harvard medical schools. He was an instructor of teachers for special classes, public health nurses, physicians taking post-graduate work in pediatrics and nervous and mental diseases, normal school students, public school teachers, and superintendents.

Originator of Ten Point Test System

As a scientific investigator his achievements are second only to those in the field of education. "The Waverly Researches in the Pathology of the Feeble-Minded," by Walter E. Fernald, E. E. Southard, and Annie E. Taft, have been completed through the first thirty numbers and

much more work had been planned. He was the originator of the ten-point system for testing and classifying of the feeble-minded. This means that in addition to the psychological examination given in every instance, the pupil's family history, personal and developmental history, school progress, school test, practical knowledge, economic efficiency, social history and traits, moral reactions and general physical conditions are all counted in estimating his total capacity. Previously it was customary to classify them on the basis of psychological tests alone. Dr. Fernald proved conclusively that this was not always sufficient.

In 1913 he received the honorary degree of master of arts from Harvard University. As a lecturer he was widely sought not only by medical schools but by every learned organization interested in mental diseases or crim-

inology. He had been twice president of the American Association for the Study of the Feeble-Minded. At the time of his death he was president of the Massachusetts Society of Psychiatry and of the Boston School of Occupational Therapy. He had just retired from the presidency of the New England Society of Psychiatry. He was a director and one of the leaders in the National Society for Mental Hygiene.

For the past several years he collected every book, pamphlet, and article available that had to do with mental defect, and the library now in possession of the school is probably the most complete library on mental defect in the world.

Practically all of the legislation having to do with defectives and defective delinquents that has been enacted in the state of Massachusetts for many years has been the result of his advice and influence. He was responsible for the law providing for the state-wide examination of school children who are three years or more retarded. He saw the need of a

separate department for defective delinquents and worked out the details of the law permitting the commitment or segregation of defective delinquents at Bridgewater.

To quote from the minutes on the death of Dr. Fernald which Professor Carver of Harvard University read at the annual meeting of the trustees and corporation:

"Those who knew him best, however, will remember him more because of his inspiring and lovable personality than because of his notable achievements. Since his death, literally hundreds of parents of children who had been under his care have testified that they loved him because they felt that he loved the children. Those who knew him realized that it was this, more than his professional enthusiasm, that drove him. Sometimes it seemed that he permitted it to drive him too hard,—but who shall say? It may have hastened the bringing of his labors to an end, but in another sense his labors cannot come to an end. He is with those of whom it is written, 'That they may rest from their labors and their works do follow them.'"



The late Dr. Walter E. Fernald.

THE SURGICAL SUPPLY DEPARTMENT, MERCY HOSPITAL, CHICAGO, ILL.

By SISTER MARY HENRIETTA, R. N., MERCY HOSPITAL, CHICAGO, ILL.

THE surgical supply department of Mercy Hospital, Chicago, Ill., was started when bacteriology was in its infancy and modern surgery was in its youth. It was taken up with professional nursing and considered one of the prime factors of the hospital. This department is based on scientific principles, the science of bacteriology, and only when viewed in this light can its worth be appreciated.

It was proposed and encouraged by such great men as, Doctors Andrews, Fenger, Morgan and Barnes, while the late Dr. John B. Murphy affirmed that bacteriology was no longer a speculation, but an acknowledged science upon the use of which depends the failure, or success, of surgical operations. Sister Mary Raphael McGill was in charge of the affairs of the hospital at the opening of this department.

She understood that the ideas of the causes of disease were fast changing and that preparation before, during and after an operation, were essential to success in surgery.

As New York was in advance of the Middle West in this matter, Sister sent to New York City for an expert under whose supervision and directions the foundation was laid for the present up-to-date supply system.

Grew to Be Separate Department

From 1893 new additions and departments were being added to the hospital. With the increase in size came an increase in volume of operations and dressings. The surgical supply department, in order to render efficient service, had to grow with the hospital. From one room adjacent to the operating room and under the same management, it has become a separate department under the supervision of a Sister especially trained for the work, and a number of assistants. Not only the operating rooms and dressing rooms are supplied by the department but all the surgical supplies for the various departments are distributed daily.

The superintendent of the surgical supply department should have a special course in bacteriology. This bac-

teriological training is necessary in order to allow her to check up on her reclaim system and to give her the assurance that sterile supplies are at all times being distributed to the various departments. In addition to this special training in bacteriology, she must be familiar with the technique of obstetrics, surgery and gynecology in order intelligently to make and supervise the use of supplies for these different classes of patients. It is understood that she must have a thorough knowledge of all the departments of the hospital and their needs in a surgical way, in order to supply the kinds and types of dressings.

The centralization of work and placing the responsibility for all surgical supplies in one person, in a distinct department is an important factor. The bacteriological control, that is so necessary and advantageous when a reclaim system is employed, becomes the special care of a supervisor especially trained in this essential branch of the hospital's activities. In addition to such a superintendent, two nurses, a woman to stretch washed gauze and bandages, with a janitor is sufficient to keep such a department in good running order and supply the surgical needs in a four hundred bed hospital.

Minimum Equipment Needed

The equipment consists of a machine for folding and rolling the gauze from the bolt and measuring it from the rolls into one-yard lengths. An electric cloth cutter is needed for cutting the yard length of gauze into the various sizes for dressings, pads, etc. The sponges are cut from flat fold gauze. The cutting machine is also used for cutting muslin breast, "T," and abdominal binders and roller bandages. An especially designed apparatus for stretching reclaim gauze, and a special foot worked machine for rolling bandages. Last but not least is the useful and much appreciated electric sewing machine. All the equipment used, with the exception of the electrical machines, is the invention of the Sister in charge, and is the result of long experience and careful study of the needs of the department, with a view to efficiency and economy of time.



View showing daily supply table. The distribution cart is seen to the right and the shelves of bolt gauze in the background.



View showing large work tables for dressings. To the left is seen the cutting table containing compartments for finished material.

Observation and experience have proved that pathogenic germs are in the air, soil and water, hence an open wound should be protected by complete sterilization of all contact matter. To insure safety to patients all dressings should have ravelled edges folded in before being sterilized, so as to be ready for use without unnecessary handling.

A large supply of surgical dressings and sponges should always be on hand, ready for all emergencies.

To illustrate the efficiency of this department. After an accident on the N. Y. Central Railroad a dispatch was sent to Mercy Hospital at 9 a. m., stating that forty of the injured were on the way, to the hospital. Before evening one hundred persons had received surgical attention. The surgical supply department had, without extra assistance, furnished all the dressings.

In 1910, two student nurses, before an audience of one hundred thirty-five superintendents and surgical supervisors, gave a demonstration of the various activities of this surgical supply department. The audience marveled at the rapidity with which work could be turned out.

During the World War the department was prepared to meet the emergency. Owing to yearly contracts and large supplies of new material and the established reclaim system, there were supplies sufficient to tide the hospital over that trying period. The training given to student nurses early in their course is of great service to them in their work throughout the hospital, especially in the operation and obstetrical services.

When Mercy Hospital purchased its first sterilizer to be operated by steam pressure, the "Reclaim System" was introduced. By laboratory tests of re-claim material all objections to the system were satisfactorily settled.

The departments are furnished with metal cans having a close fitting top. The used dressings and roller-bandages are placed in these cans and removed each morning to an assorting room. They are placed in muslin bags and sent to the laundry. Here the bags of used dressings, etc., are washed in cold water and then in hot water, boiled for fifteen minutes in soap suds and for five minutes in clear water to remove the soap, then passed through a wringer.

They are then sterilized under pressure and taken to the supply room. The drying process is facilitated by stretching the gauze and roller bandages on special appliances. All material is reclaimed and the waste is reduced to a minimum. As a result of the removal of the used

dressings from departments at such frequent intervals, the so-called "hospital odor" is eliminated.

The department has covered a period of thirty-one years from 1891 to the present time and has steadily advanced with the development of bacteriology and surgery. It has ever met the demands of public and private needs, by taking up or putting down, accepting or rejecting as the changing times, ideas and discoveries suggested.

Mercy Hospital may justly mourn its late foundress and superior, Sister Mary Raphael; as well as its famous surgeon, the late Dr. John B. Murphy. By their cooperative labors they produced that force which gave Mercy Hospital a world-wide reputation for its success in surgery and immortalized the name of Dr. John B. Murphy.

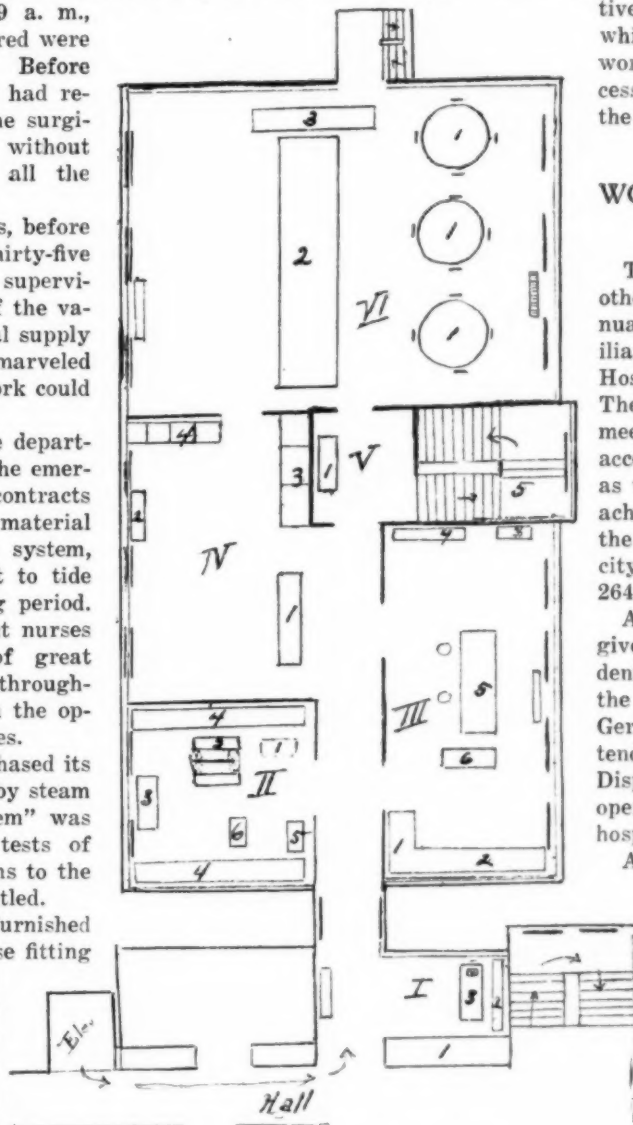


Diagram of surgical supply department.

- I—(1) Department supply lockers; (2) bandage stretcher; (3) table; (4) bandage roller. II—(1) wash gauze; (2) stretching and drying machine; (3) table for folding, sorting dressings; (4) supply containers; (5) scale for bundles; (6) electric sewing machine. III—(1) absorbent cotton; (2) bolt gauze; (3) daily supply press containing mouth sponges, pads, applicators, binders, rollers; (4) cotton; (5) daily supply table; (6) distributing cart for sterile supplies. IV—(1) sterile packets of various kinds (cash); (2) apparatus for enemata, douches, etc.; (3) supply press (large and small dressings, binders, (4) supply press (I—sponges, II—sponges, III—sponges). V—Accounts, (1) desk. VI—(1) large work tables for dressings; (2) cutting table containing compartments for finished material; (3) specially constructed machine for folding, measuring and cutting bolt gauze.

WOMAN'S BOARD HOLDS ANNUAL MEETING

Two hundred members and others interested attended the annual meeting of the woman's auxiliary board of the Presbyterian Hospital, Chicago, held January 5. The reports and papers of the meeting centered around the work accomplished during the past year as well as a general review of the achievements of the board. It is the oldest woman's board in the city and has, at the present time, 264 members.

A review of the hospital was given by Mr. Frank Shaw, president of the board and a review of the work in dispensary, by Mrs. Gertrude Howe Britton, superintendent and director, Central Free Dispensary, Chicago, Ill., which is operated in conjunction with the hospital.

A review of the medical service was given by Dr. Ernest E. Irons, who directed attention to the signal accomplishments of the hospital with respect to special dietary work, to the experiments of Dr. and Mrs. George F. Dick with scarlet fever anti-toxin, the work of Dr. Arno B. Luckhardt in the successful use of ethylene gas as an anesthetic.

The roll call of membership was read by Mrs. D. W. Graham, a charter member of the board, and the report of the secretary was given by Mrs. Perkins B. Bass, secretary of the board.

The close relation between sickness and inefficiency, between poverty and sickness is a correlation that has long been apparent to those who work in the field of the social agencies.—Williams.

THE POSITION OF PATHOLOGIST AND CLINICAL DIRECTOR IN THE STATE HOSPITAL

By HAROLD I. GOSLINE, M.D., PATHOLOGIST AND CLINICAL DIRECTOR, STATE HOSPITAL FOR MENTAL DISEASES, HOWARD, R. I.

FROM nine years' experience in state hospital work, it is my belief that the guiding principle in hospital management is the principle of expediency. It is to this principle that I attribute the present arrangement of administrative functions into a medical service and a ward service with a superintendent at the head. Into such a plan a research service cannot be introduced without considerable upset. I have seen it tried repeatedly without success or with only partial or mediocre results.

The status of the pathological service in most state hospitals testifies to the validity of a contention that something is wrong somewhere. Pathologists with but few exceptions do not remain in the same hospital continuously for any great period of time. They become dissatisfied and I do not doubt that superintendents become dissatisfied with them. As evidence of the constant labor turnover of pathologists we have the round-table conference on laboratory matters in Boston at which a laboratory career was considered by some as too small a job for any large caliber man, and as evidence of the dissatisfaction of superintendents we have the hesitation with which many superintendents approach the subject of establishing a pathologist in their hospital. In one instance, to my knowledge, a member of a governing board contended that a pathologist could not be kept anyway. His idea seemed to be that wandering from place to place was part of the nature of the beast.

Now, it is the object of this discussion to iron out some of these difficulties. We ought to be able to show the pathologists that their work is a man-size job and we ought to be able to show the executive and administrative officers that a pathologist can fit into their organization without disrupting it. If we can succeed in doing this we ought to see a new era for pathologists, with new advances in the science, new discoveries, a better understanding of mental disease, possibly a shorter hospitalization period, and finally, a knowledge of prevention which should be rapidly extended. If we succeed, we ought to see executives demanding that a pathologist be installed in their organization and where there is a real *bona fide* demand, there will inevitably be a supply. That supply will be of the quality demanded and paid for.

Three Divisions of Hospital Activity

The first step in this direction is the recognition of the functions or activities going on in any hospital as belonging to three chief groups. One group has to do with the physical plant, another with medical care, and the third with science and research. You may call the divisions of your organization medical service and ward service, if you will, or call it anything else you will. If we recognize these three major functions or activities we shall have no difficulty in fitting in a pathologist and clinical director. The recognition of this three-fold division is, I believe, fundamental. With it will go all the other things that I have outlined above, a demand for pathologists, a supply of pathologists who will be willing to remain, a good medical service, a better ward service and advancement of the science.

The superintendents, following their policy of expedi-

ency, will find the suggested arrangement expedient.

About two years ago, at the request of the superintendent of the State Hospital for Mental Diseases, Howard, R. I., I made a large chart showing these three services and in a general way what the relationships of the subordinate services are to these three great divisions. It was very difficult to show all these relationships on a single chart. As I see it now, they would have to be shown somehow in three dimensions on a sort of pyramid or other complicated figure in order to put all the relationships into one figure.

Another method is to have one general chart and several subordinate charts for different types of relationships. Thus, for example, one position may be multi-relational. It may be directly responsible to the superintendent in matters of policy, it may be subordinate to the steward in matters concerning his department, it may be subordinate to the ward physician in matters concerning treatment of patients or at least to the assistant superintendent, and it may be subordinate to the clinical director in matters concerned with research upon the patients and in laboratory matters. A similar subordinate exists in all branches of hospital service, the laboratory having to recognize and to avoid interfering with the routine ward work or with the steward's department, the steward having to avoid interfering with the other two chief services and the assistant superintendent having to avoid interfering with the operation of laboratory and research methods or with the steward.

Now it can be readily seen that the occasion for many conflicts is already before us. We found that the laboratory required patients for some purposes at the same time that they were needed, for example, to work in the kitchen or to take a shave and bath. The laboratory could not get its work done; the man must be shaved and bathed. In this instance we hit upon the plan of having those routine laboratory procedures done on certain days and at times convenient to the laboratory and to the ward services. And so on through a variety of situations, an arrangement made must be adhered to; a priority established cannot be repeatedly changed and still maintain morale and discipline which are, after all, the two things really essential for the successful operation of any enterprise. These two maintain just the right amount of force and orderliness. Without them the organization becomes hyperkinetic in one aspect, hypokinetic in another, and lack of order and ataxia result. We say that morale and discipline are impaired.

I will not here take the time nor the space necessary to show the relationships existing and the adjustments necessary between all departments and subdivisions of the hospital service. That would provide material sufficient for a treatise. Let us take up merely the duties and the responsibilities of the clinical director and pathologist.

Duties of Clinical Director

The scientific and research department of the hospital service, of which he is the head, has the duty of seeing to

it that every case coming into the hospital has the routine laboratory procedures done upon it. In addition, the pathological branch of these activities attends to requests from ward physicians for laboratory work on patients acutely ill and also attends to making laboratory surveys of the hospital from time to time.

The extent of what we call routine varies in different hospitals. There is no standard. An attempt has been made to establish a minimum but has not thus far met with success. I think that a maximum should be set toward which all hospitals should endeavor to progress and that maximum should not exclude any method that might prove of service in the diagnosis, prognosis, treatment and rehabilitation of the cases in our charge. In other words, every hospital ought to have the five fundamental laboratories or, at least, access to such. These I consider to be the clinical pathological, x-ray, psychological, chemical and bacteriological. All others are branches of these.

So the extent of routine varies and has no set standard. My contention is that we should include all these laboratories in the routine examination of all cases for a matter of at least five years. With this mass of material at hand and with the research which will develop inevitably from this material, it seems to me to be absolutely certain that we shall know something definite about the etiology and genesis of mental diseases, in a matter of five years.

Guided by Ward Physician

Now, of course, routine work should be guided by the ward physician, in this respect, that he should inform the laboratory of any illness of the patient which contraindicates some procedure. The laboratory will then make the proper allowances and changes. Courtesy and respect will govern these relationships and courtesy and respect will solve many of the ills of hospital organization just as easily and quickly as they solve the disaffections between individuals.

Requests for laboratory work on patients acutely ill or on those receiving special attention from the ward physician for any reason, originate with the ward physician and are carried out promptly by the laboratory. In times of special stress, it may be necessary to label these requests "emergency," "emergency within twenty-four hours," and so on, allowing sufficient distinction so that it will not be necessary for the ward surgeon to use the word "emergency" unnecessarily and at the same time, so that the laboratory may know what procedures should rightly have precedence.

Laboratory surveys at the hospital may be carried out in a number of different ways. It will be sufficient to describe two. The first method we use when we open a new laboratory, by going through the entire hospital population as rapidly as possible, without breaking up our routine examinations or requests from the wards. Thus we have examined for syphilis the blood of every patient in the hospital. We have done a urinalysis on every patient and we have done a complete blood count. When we open other laboratories we shall make similar complete surveys.

The second method is to require that laboratory procedures be repeated each time a note is made on the condition of the patient, the so-called "yearly note." Thus every patient in the hospital has his laboratory work repeated at yearly intervals and the laboratory benefits by the amassed material for study and research. The wards, the physician and the patient benefit by the added study

and knowledge of the case. This sort of clinical and laboratory correlation is absolutely essential, if laboratory work is to be of the greatest possible service. A laboratory without an up-to-date group of ward physicians is bound to fall far short of its possibilities and its capabilities are going to be severely stunted.

Group Cases Directed by Laboratory

In our hospital there has already grown up an idea of how far the laboratory should be engaged in treatment. We have decided that group treatment should be directed by the laboratory. Thus, the laboratory has acquired the keeping of records of groups of cases suffering with the same disease, such as syphilis, and the reporting of such cases to the local and state boards of health. We have a book for syphilis, one for gonorrhea, one for tuberculosis, one for epilepsy and one for pellagra. The syphilitics, gonorrhea cases and epileptics are all of them receiving systematic treatment. One can see how easy it will be to extend this system to other diseases.

Naturally these groups point the way to research at once. We expect to take the epileptics first, to learn all there is to be known about them with present methods, then to present this in monograph form for the guidance of those who may desire to take up research work in other parts of the world.

So far in this paper I have tried to outline, without going into any details, the general relationships of the pathologist to the rest of the hospital and to say a word about his duties. Further detail should be left to future publication in book form.

Let us now turn to a description of the relationships and duties of the clinical director. In a general way, we may state that this position should cover the clinical work with patients which is of a scientific nature, and the activities of other agencies in the hospital whose purpose is to get patients back into the community faster, the work of rehabilitation, such as occupational therapy, the social service in certain of its phases and the dental work.

Routine Examinations by One Physician

In order to cover the first point without causing too rapid a change in present methods we have first made arrangements so that all routine physical and neurological examinations on new patients (excluding the admission physical) are done by one physician. This insures uniformity of results, gives the other physicians a freer hand, which they like, and expedites matters very considerably. Our next step in this direction will be to have each physician assigned to examine a part, as was done in the army. In this way the week's quota of patients may all be examined in a very short time, those who have any defects can receive the functional tests, which few get anywhere under present methods of examination, the case will be better understood and the effect upon all concerned, physicians, patients and relatives will be very desirable. The psychological effect of this show of interest by all members of the staff cannot be overestimated.

To unify the mental examinations is a more difficult task. For this purpose, we have made two arrangements. In the first, one physician does only the mental examinations on a case. In the second, we have begun a standard guide for the use of all members of the staff which clears up the present confusion with regard to the mental examination and its meaning. As a first step in the latter direction we have made a symptom index. The second

step will be to clear up the confusion which exists in the minds of examiners as to what is mental *per se* and what is behavior or conduct. This will take considerable time and labor before it is accomplished.

No attempt has been made so far to control social histories or previous histories or family histories. This, again, is work for the future. I believe that we should get more data along these lines. When we re-arrange this material, we can see evidence of physical disease clearly when it exists, and we can see clearly whether causative factors lie chiefly in the environment or in the person whom we are studying; if in the former, we change that, if in the latter, we search for etiology by laboratory methods.

Next, in the patient's course through the hospital comes the clinic. Here the director should preside for the purpose of correlating clinical and laboratory work, for suggesting lines of treatment, study or rehabilitation. Then he should follow the patient's progress upon the wards, both by means of the regular ward notes made by the physicians and by means of conduct charts which are to be filled out by the nurses and attendants. In this way cases for special study may be picked out when no other method reveals them. When the conduct chart begins to show variations, all the agencies in the hospital should begin to study the case during the upset. Thus we may more rapidly understand the nature of the factors working upon our patients.

The Clinical Director on the Ward

Another very real reason for the presence of the clinical director upon the wards is that he may observe personally those under special treatment, such as the epileptics, the syphilitics and the pellagrins.

It may be thought that this arrangement will cause a division of responsibility of ward attendants and of ward physicians. This should not come about because the clinical director should consult with the ward physician, not giving any orders to the attendants directly, and in the case of the ward physicians the dividing line between what is custodial care and what is special treatment is easily adjusted. The method is already in operation in our hospital and is entirely harmonious. These special treatments, such as the administration of salvarsan, are given by the clinical director or under his direction and the ward attendants understand how far they are responsible to the clinical director and how far to the ward physician.

Occupational therapy has progressed rapidly in our hospitals. Its basis is largely empirical. The clinical director can take up this work with the occupational therapy teacher. The psychological laboratory should be enlisted in the study of individual differences, especially individual handicaps and special abilities. In this way, we may be able, some day, to select the work to suit our patients on really practical grounds, instead of on the present trial and error basis. In our work it may be fairly contended that days lost amount to little, but in business the development of methods designed to show at once special abilities or disabilities will save much money. Now it may cost a firm several hundred dollars to discover that a man is unsuited for his job. We should make a beginning in this work in our hospitals. Not only will our patients benefit by such study by being prepared for life outside the hospital, but the community may expect to benefit by the knowledge acquired in the study of special abilities and disabilities in the mentally ill or deficient.

There is another reason why occupational therapy should be closely allied to the work of the clinical director. That is, both are concerned in getting the patient back into the community sooner than would be possible without these activities. Thus in the minds of superintendents these should be considered together. Of course, in asking for funds for occupational therapy it is a question whether we should group the laboratory with occupational therapy. It may be rightly objected that money is obtained best when requested for a specific object the need for which seems clear to the public mind, and when the total amount is not large.

I will leave that question to those experienced in getting money from legislatures. My presentation is calculated only to make matters clear to superintendents, assistant superintendents, pathologists and clinical directors. These men, if they will look through their glasses from this angle, will see that both occupational therapy and clinical measures and laboratory methods have the common object of getting patients rehabilitated faster and, for this reason, they should be considered together.

Social Service Shortens Stay

In considering the activities of the social service department, it will be noted that certain of them are designed to get the patient out of the hospital more quickly. From one point of view all of them have this object, for even history taking enables the doctor to know the case better and thus, indirectly, aids in early discharge of the patient. Thus the relations existing between the clinical director's office and the social service work of the hospital should be very intimate. The psychologist should be consulted where rehabilitation is considered, in order to give advice about special abilities and disabilities. Again, the question of the treatment of syphilitics and of the families of syphilitics should be gone into thoroughly. The continued treatment of epileptics should be arranged for after they leave the hospital so that this class of unfortunates shall not get into the hands of quacks. Patients suffering from gonorrhea should not be allowed to leave the hospital without adequate treatment and follow-up work. This is regulated partly by state law so that it becomes our duty in Rhode Island. For this purpose, the social service worker and the clinical director must cooperate in the care of syphilitics and gonorrhea patients and others from the hospital on parole in the community. The same obtains in the case of tuberculosis patients. Arrangements should be made to notify the proper authorities, to seek the services of the district nurses or to care for the patient at home.

Another agency in the hospital that is especially dealing with the problem of health is the dental office. I do not know that we have emptied the hospital or that there has been any great increase in our discharge rate since we have had a resident dentist, but there is a good showing in general health and I am sure that the patients are benefitted by having poor mouth conditions properly treated. The mouth is no exception to the rule that pus should be evacuated.

Relation to Dental Department

The relationship between this department and the clinical director should be intimate and cordial. Records should be kept by the dentist which will enable the physician in charge of the case to know at once what has been done, and the clinical director should be enabled to

study the effect of dental work upon general health or upon the mental condition of the patients. Uncontrolled work in the dental office of a state hospital is as hopeless as unrecorded, uncontrolled, and irregular treatment of syphilis.

This completes the duties and responsibilities of the pathologist and clinical director in so far as they are concerned with the medical service and ward service of the hospital. There may be a number of other activities outside the hospital for which a man in such a position is the logical candidate, provided he realizes his opportunities. Thus I find in my office, files concerned with lectures at the local university (Brown) on mental hygiene subjects, others concerned with the public schools, others for the courts, another for activities connected with the other state institutions, another for the state board of health, another for the state society for mental hygiene, another for the National Committee for Mental Hygiene and one for the American Psychiatric Association. I will not go into these relationships in any detail but it does seem to me that pathologists and clinical directors need not want for a "man-size job" if they see their opportunities, and it seems to me also that superintendents need not look for men to represent the scientific side of their hospital if they will also see the opportunity which is before them and will establish a scientific and research department in their hospital which will make an appeal to and which will attract men of large caliber.

In summarizing, it should be stated that this plan is not complete, as I have omitted from this presentation certain duties of this department which are now in operation. Undoubtedly, as we progress, other duties will arise to become incorporated in the plan.

My object in presenting this discussion is first, to show others what can be done, second, to change the ideas of those who regard the position of pathologist practically as that of a high-priced technician, third, to give a working basis for the development of an adequate conception of what a clinical director is together with his duties and responsibilities. A change in these ideas will benefit our hospitals for mental diseases, our superintendents, the patients, the pathologists and clinical directors themselves, few though they are, and finally, the science of psychiatry in general.

I fear that many of us have fallen into the ancient error and believe that "doing" counts more than "thinking." The practical man versus the theoretical man is still a vital question. It seems to me that some arrangement should be made in a plant so that theoretical questions can be discussed and worked out to their practical conclusions. This should be the function, *par excellence*, of the office of pathologist and clinical director in a state hospital for mental diseases.

When seen in this light and given proper recognition and adequate standing, the very construction of state hospitals will take on a new aspect.

THE AUTOPSY AS AN ESSENTIAL TO THE PROGRESS OF DIAGNOSIS IN MEDICINE

(Continued from page 150)

pulsory in certain instances, and to be against them is to accomplish double mischief, first, against the state, and secondly, against the individual. It is a recognized process in all medical jurisprudence that if a man dies in a mysterious manner, due, for example, to an accident, or to an assassin's bullet or knife, it is the function of the coroner or his physician to examine the body and determine the cause of death, so that justice may be had. Now

suppose that an orthodox Jew is murdered by a cruel and vindictive enemy, or suppose that this Jew met death in a terrible catastrophe. The body of this Jew will be necropsied by the legal authorities. To be against such an autopsy is to be against the law.

Imagine then the horror and remorse of his orthodox relatives who besides undergoing the dreadful tribulation of the death of this loved parent or brother, must now suffer the undeserved mental anguish of an autopsy, in spite of the Jewish law. Surely such a state of affairs should be remedied.

The prohibition of autopsies placed a great impediment in the path of medical progress among Jews. If autopsies are not encouraged, no Jewish school of medicine can be created in Palestine. Medical students who are orthodox in their belief will be prevented from performing these necropsies. If such a system should be encouraged amongst Jews, medical learning will surely begin to deteriorate amongst us, and we shall not be worthy of carrying on the torch of healing so worthily handed down to us by our ancestors.

4. We cannot learn all or any human anatomy or pathology by dissection of animals. Medical progress began with the time of Vessalius when human dissection came into vogue. The study of disease cannot be attained by examining animals who suffer from different diseases. It is essential that ante-mortem symptoms be correlated with post-mortem findings so that the art of diagnosis be enhanced, and thus the art of healing.

For the reasons enumerated above, it is essential that the Jewish interdiction of autopsies be removed so that Jewish physicians and Jewish hospitals accomplish as much for their communities as the Christian hospitals do. It is wise to remember that very often Jewish physicians, believing in the justice of their cause, will perform so-called "stolen autopsies" in order to increase their knowledge and usefulness.

The board of directors of the Beth Israel Hospital (a strictly orthodox Jewish institution), recognizing the necessity of human autopsies, adopted the following resolutions:

"It is the sense of the board of directors of Beth Israel Hospital that autopsies, having now been found by the progress of medical science seemingly essential in many cases, shall be performed upon bodies of the Jewish dead, if the same can be done in conformity with Jewish rights, laws and customs and that the necessary propaganda be made appropriate for the purpose."

WHY PEOPLE GIVE TO HOSPITALS

Lillian Brandt in her book "How Much Shall I Give," has divided the reasons why people give into eight groups, as follows: sympathy for suffering; desire for divine approval; to meet the expectations of loyalty; for the pleasure of doing good; the intellectual and esthetic forces; and inactive motives.

CROSS-WORD PUZZLE CASUALTY

Los Angeles, December 9.—Fatigued after hours of futile study over a baffling cross-word puzzle, W. E. Caruthers stretched his mouth in such a prodigious yawn that he dislocated his jaw. Hospital surgeons today said it was the city's, possibly the country's, first cross-word puzzle casualty.—*Philadelphia Public Ledger*.

The scope of modern medicine is as wide as the range of influences, physical, biological, mental and social, which affects health. Dr. George E. Vincent, president, Rockefeller Foundation.

INFANT CLASS SURVEY, CHILDREN'S DISPENSARY, MT. SINAI HOSPITAL, NEW YORK, N. Y.*

BY SAMUEL ADAMS COHEN, M.D., NEW YORK, N. Y.

IT SEEMED advantageous at the dispensary for children of the Mt. Sinai Hospital to organize a separate clinic for children under two years of age. We feel that sufficient time has elapsed since the beginning of this project to examine the results thus far attained.

The clinic is held three afternoons a week. The total number of infants seen up to January 1, 1924 was 375, ninety per cent of which were Jewish. The sexes were evenly divided. Forty per cent of the infants were under six months of age, twenty-seven were between the ages of six and twelve months. The remainder were between one and two years of age.

We were impressed by the fact that mothers have been returning to the clinic with their "new babies" at a much younger age, than previously, and before their ailments become serious.

Since weight is generally accepted as an index to an infant's condition, we use these weights as a basis of classification. At fourteen weeks of age only fifteen per cent of the infants were below average weight. This percentage of infants below average, according to age weight tables, becomes larger with increasing age: thus at six months of age the per cent of infants below the average in weight was forty; at 12 months it was 50. Over twelve months of age the per cent of infants who fall below the average weight line is correspondingly greater. Judging by the weight of infants at their first appearance at the clinic, the observation may be summarized by stating that the older the infants the higher is the percentage of those below the average weight.

Chief Complaints Tabulated

We have classified the chief complaints given by the mother at her initial visit to the clinic. Since not all histories are reliable, we have only selected 251 histories and tabulated them according to the age group. Our physical examination substantiated the mother's observation and history in almost every case.

Of the fifty-seven infants' histories selected under fourteen weeks of age:

Ten came because of "coughs and colds," that is, because of some infection of the respiratory tract.

Fifteen complained of some gastro-intestinal disturbance.

Six complained of hernias.

Five complained of persistent crying.

Twelve came for a variety of complaints such as skin lesions, convulsions, cephalohematomas, etc.

Seven came for advice in feeding their babies.

Only two came because the mother wanted instructions or advice in baby hygiene other than that regarding feeding.

Between the ages of fourteen weeks and six months there were sixty-one histories selected, with the following results:

23—some respiratory infection.

12—gastro-intestinal disturbance.

6—skin lesions.

6—no specific complaint other than fever.

5—for some problem in feeding.

9—miscellaneous complaints.

There were eighty-two histories chosen between the ages of six and twelve months, results as follows:

37—respiratory infection.

11—gastro-intestinal disturbance.

7—fever of undetermined origin.

2—some difficulty in taking their feeding.

14—skin lesions.

11—miscellaneous complaints.

Of the fifty-one histories selected of infants between the ages of twelve and eighteen months, the following results were found:

27—respiratory infection.

9—gastro-intestinal disturbance.

6—skin lesions.

4—mental and physical retardation.

5—miscellaneous complaints.

In the age group infants between the ages of eighteen and twenty-four months, the chief complaints were too complicated to classify.

Respiratory Infections Lead

It is seen from the above figures that below the age of eighteen months there were at least ninety-seven infants or thirty-eight per cent who harbored some infection in the respiratory tract at the time of their first visit to the clinic. Between six and eighteen months the percentage of infants who have respiratory infection on their first visit to the clinic is as high as forty-eight.

There is no doubt that respiratory infection results from many causes many of which can be placed under the heading of poor hygiene. A rather common but important cause of trouble comes from overdressing the infant even in the summer time. We see many babies over-dressed and almost smothered with too many clothes.

The relation of overdressing to respiratory infection is undoubtedly influenced by the prevalent idea of the laity, that underdressing leads to colds. With this idea firmly fixed, it is natural for mothers, especially those who frequent the out-patient department, to overshoot the mark and overdress their infants.

Moreover, mothers who share in this belief exhibit other evidences of improper hygiene. In other words, our conception is that in instances of overdressing the infant, we usually find other unhygienic factors which are responsible for the spreading of infection, namely, closed windows, stuffy and overcrowded small rooms, in which there is lack of sunlight and proper ventilation. There is also the harmful practice of handling and passing the infant from person to person. In short, close contact, overcrowding, and lack of ventilation are almost ideal conditions for the spreading of infection, particularly respiratory infection.

We have already demonstrated that by having the infant dressed sensibly, placing it outdoors and directly in the sun, if possible, keeping the rooms fresh and well ventilated with windows open, and by avoiding crowds and contact with other people, we can diminish the incidence of coughs and colds in a certain number of patients.

*Presented in part before the Bronx Pediatric Society, May 14, 1924.
1. From the service of Dr. Béla Schick.

There is no doubt but that rickets plays a part in both the disposition and continuation of many of these respiratory infections. We feel that in relieving many infants of rickets by the administration of cod liver oil, we have also relieved them of their tendency to respiratory and other infections.

Over 90 per cent of the infants attending our clinic show evidence of rickets. Some of these were exclusively breast fed. The Jewish infants showed no particular immunity to rickets, although the degree of rickets was less than is commonly seen in Italian and negro infants living in the same district.

Direct exposure to sunlight and keeping infants outdoors was preached continually to all mothers. In addition, cod liver oil (the better preparations) in doses of one to three teaspoonfuls daily was given as a routine to all infants, regardless of age. In most instances it was discontinued during the months of June, July and August. To some infants one-half to one whole egg yolk was given daily. There were infants who received quartz lamp treatment in addition to sunshine, cod liver oil and egg yolk.

Our attempts to prevent rickets in many of these infants were disappointing. In spite of the above physical and medicinal prophylactic measures, rickets developed right under our eyes. Dr. L. R. DeBuys of New Orleans, La., had similar experiences. Dr. L. Findley of Scotland points out that cod liver oil has curative not preventive effect.¹ The curative effect of cod liver oil was excellent.

The gain in weight of infants over whom we exercised control was gratifying. While the pediatrician employs figures to show the result of his efforts, those results should be far-reaching beyond any specific tabulation which can be shown on paper. In spite of our apparent success as indeed on the basis of increased weight, nevertheless, we feel it to be true, that the real value of any clinic must be based on the broad scope of its work rather than to be limited to the success of any one of its particular projects. The influence of the work must extend to the home and the community.

Patients Under Two Years Not Discharged

No patient under the age of two years is ever discharged from our clinic. Nothing more than a verbal appointment or mention of the date is made to the mothers. (In acute illness, the mother is told to return at any time she deems it necessary.) Thirty per cent of our 375 infants came to the clinic but once. Anxious to ascertain the reason why so many failed after the initial contact, the social service department investigated and brought out these facts:

Twenty-four mothers stated that their infants were

"cured" and did not see any particular reason for returning.

Five stated that they were not told to return.

Eight were being taken care of by private physicians.

One was being taken care of by another clinic.

Four died.

Ten moved.

Three were unable to bring child to clinic.

Three were not at home.

Fourteen had grievances against the clinic.

Thirty-seven were not found nor was there any trace of the family ever having lived at the address given.

In commenting on the above report all but the last two items speak for themselves. Concerning the grievances held by fourteen, it must be admitted that some were just grievances. Other criticisms were founded on trivial irritations describing in a rather exaggerated manner.

The striking feature, however, was this, that in reviewing the records of these fourteen patients, we were impressed by the fact that all the infants were badly in need of medical care and attention.

Regarding the last item of "lost cases," much may be said. In a few cases there is always the chance of families moving and their identity even being forgotten by neighbors. In other instances there is the probability of error in recording or copying the address; but by far the most likely explanation is that the addresses were deliberately falsified in order to forestall investigation, either for financial or social

reasons, or else because of non-residence in the city, since the clinic is intended for children residing in the city of New York.

One of the most valuable yet difficult prescriptions to follow is that in which "time" is principally involved. We constantly encourage our mothers to employ natural forces in the healing of their infants and to learn preventive measures. Some physicians stress the necessity of giving out-patients at least one bottle of medicine or else forfeit their confidence.

We try gradually to overcome the mother's belief in a specific drug for every ailment. We strive to show her that good nutrition and adherence to the principles of good hygiene are the best medicines. During illness, we stress again the importance of diet and advice of hygiene to suit the particular case. Our hardest task, in many instances, is to explain convincingly the need of prolonged convalescence.

Regardless of the child's condition, after the acute condition has subsided, there is an impetuous desire on the part of the mother to make up for lost time. The infant is expected to respond to stimuli as he did previous to his illness. The parents almost always endeavor to assure themselves that the infant is all right, and the infant's reserve strength and energy is soon drained by prolonged physical efforts to entertain or be entertained. The

The Clinic and Child Care

SOME interesting sidelights have been thrown upon the causative factors and home care of infants' diseases in the children's dispensary at Mount Sinai Hospital, New York, N. Y.

Investigation of a group of out-patient infants showed that colds and respiratory infections constitute the leading diseases. Often the basic causes of these common ailments are found to be unhygienic habits of living, such as overdressing, lack of sunlight and fresh air, as well as rickets. The results of improper feeding and lack of discipline are very evident in infants above six months. Many of the deplorable conditions of nutritional disturbances and misbehavior are prevented when the mothers place the child under clinical care and abide by the instructions of the physicians in charge.

¹ Discussed at the meeting of the American Pediatric Society, Pittsfield, Mass., June 5-7, 1924.

harmful, and sometimes even fatal, results of carelessness and haste during convalescence are too well known to call for discussion here. Patience is doubly a virtue during the convalescent period. Whether the child has been acutely ill for one day or one month it is of the utmost importance that the return to the usual routine be gradual. There is almost always the tendency to forget previous experience and become careless during this critical period. We have been somewhat successful in stressing the importance of medical supervision during the convalescent period and have had gratifying results.

We do not consider it out of place to discuss the opportunity that comes to every out-patient department to assert itself to the patients. It is unfortunate that human nature is such that people are not always ready for instruction in health topics. Experience has demonstrated that the most opportune time for the patient and physician to become better acquainted is during that period when health is impaired. During this time the patient is in a receptive mood for health instruction. Now is the time for the physician to concentrate his efforts and demonstrate the value of proper living conditions. The previous shortcomings should be pointed out for the sake of avoiding these or similar ones in the future. Details of carrying out these instructions are unnecessary here, since circumstances alter situations and the personal equation is always a deciding factor.

We prefer to give simple prescriptions in our diets. We have prescribed whole milk or whole milk diluted with water and granulated sugar added. This formula is boiled for from three to five minutes.

Good Results with Concentrated Feeding

Just a word may be mentioned regarding concentrated feeding. In selected instances we have had excellent results. We overcome the difficulty in infants who for some reason or other will or cannot take sufficient volume of food to cover their requirements by giving them undiluted whole milk and as much as 8.5 to 17 per cent additional cane sugar. Sometimes we concentrate our volume of food by the addition of cereal cooked with milk or by the addition of fat in the form of cream.

We have great praise and admiration for the mothers who frequent our out-patient department. The responsibility of bringing up her child weighs heavily upon the mother and everything possible should be done to help her shoulder this responsibility and lighten her burden. Often in outlining a 24-hour schedule we forget that the mother has a thousand and one other duties about the household which tax her strength and mind.

It may be of interest to know that among 271 complete family histories it was found that

Seventy-one families or 26 per cent had but one child.

Sixty-four or 23 per cent had one other child living.

Seventy-three or 27 per cent in addition to the infant had two other children living.

Sixty-three or 23 per cent had at least four or more children living.

Eight of these 63 had nine children living in the family.

The above table shows that in addition to her general household duties, 50 per cent of the mothers have three or more children to take care of. In prescribing diets or formulae or in outlining hygienic measures we have tried to be practical and to spare the mother as much time and energy as possible.

Much more might be said regarding the work of the clinic. We have picked out a few of the more important topics. We are fully aware that in every infant clinic there

in some particular hobby which attracts the attention of the physician. On the other hand, there are present in most infant clinics conditions which might be bettered. In our clinic these improvements seem indicated:

1. Provision for seeing the babies as soon after birth as possible.

2. A thorough follow-up system.

Regarding the first we feel that the chances for success in infant welfare are much better if the infant is seen in the early weeks of life when preventive measures may be begun. In the early weeks of life there is much that is done in the way of encouraging the continuation of breast feeding, building good habits of feeding, sleeping outdoors, exposure to sunlight and other fundamentals of good hygiene. The mother, who is usually more particular and anxious at that time is more eager to cooperate. On the other hand, after the age of six months, the physician is often confronted with many problems in addition to that of nutrition. Many of our failures and disappointments have been with those infants who were seen for the first time after their sixth month. The results of improper feeding and lack of discipline are very evident after this age. The mother and child are then "set" in undesirable habits which are difficult for the physician to modify.

We feel that when a physician takes care of the infant immediately after birth, most of the deplorable conditions of nutritional disturbances and misbehavior are prevented or at least greatly lessened. By constant instruction the mother is made to realize the importance of the entire situation and soon becomes filled with the desire to cooperate to the fullest extent. Convincing proof of the clinic's worth in this connection is seen in the infants who have been under our guidance since the early weeks of life. They are superior in every respect to those infants who came to us for the first time after they had reached their sixth month in life.

The need of a competent follow-up system in our infant clinic is very evident. To attempt to conduct an infant clinic without a follow-up system is to place an unwarranted handicap on both the physician and patients of the clinic.

The follow-up system imparts personality to the clinic. It promotes a feeling of cooperation on the part of the patients. The patients feel that they are a part of the clinic and quickly cooperate with the purpose and spirit of the work. They feel as if there is someone to share their responsibility and who is helping to solve their many problems. The social service worker becomes a sort of a confidant to the patients. Physicians who have had the good fortune to be associated with an infant clinic having a follow-up system are enthusiastic in their praise for it. They are enabled to give their time, which is necessarily limited, to the medical phase of the problem, leaving those details which are important but which do not require medical skill to be cared for by the social service worker. In this way they are able to study their cases more carefully and also to check up the results of their treatment.

In the clinic the physician's problem is not so much what to do, but what can be done with the material on hand. The follow-up worker is able to give a fairly accurate picture of background and resources of the material on hand the physician will guide himself accordingly.

The time and expense saved by this procedure is most significant. What is more important there is a greater service rendered to the patient and the physician through the closer bond of union established by the follow-up worker. The extra expense that may be involved is more than offset by the amount saved in other ways.



THE INFORMATION DESK

No satisfactory solution to a problem in your hospital is too trivial to pass on to other workers in the field. No question that perplexes you is too small to bring to the attention of those with greater experience in the field. This department is the readers' exchange, and its usefulness is dependent upon the measure in which its readers share their problems and their discoveries.

DON'T BUY WET COAL

By W. F. SCHAPHORST, M. E., Newark, N. J.

We were told long ago by the U. S. Bureau of Mines that the wetting of coal is expensive. The higher the cost per ton, the greater is the cost of wetting.

I have a letter from O. P. Hood, chief mechanical engineer of the Bureau of Mines, in which he replied to my inquiry regarding percentage of moisture as follows:

"The amount of water absorbed by coal depends upon its fineness. Water adheres to surfaces, and is not drawn into the body of the piece to any great extent. Bituminous coal in lumps the size of an egg, when drenched with water, will increase in weight only a fraction of a per cent. Fine sizes, however, of both bituminous and anthracite, will hold up to 20 per cent of moisture, depending upon the fineness."

When you purchase coal insist on its being dry or at least be sure that an allowance is made for the moisture contained in it.

To make a test for moisture is not difficult. Simply take ten or twenty pounds of the average wet coal and pulverize it. Then heat it gently as for example on top of the boiler so that only the moisture will be evaporated. Do not heat it to such a degree that any of its gases will be driven off. After drying weigh again and subtract the final weight from the original wet weight. Divide the difference by the original weight and the quotient is the percentage of moisture. A moisture of 12 per cent is not at all uncommon. One purchaser states that he had bought coal showing 35 per cent water when delivered. In other words at \$10 per ton he was paying \$3.33 for the water. If water were combustible it would not matter much, but instead of aiding combustion water retards it. Therefore, water is the cause of a double loss.

Coal can have a perfectly dry appearance and still contain as much as 10 per cent water.

I have before me a letter from one of the country's foremost authorities on mining matters in which he says concerning moisture in and on coal:—

"In general, lump coal carries less moisture than run-of-mine, while fine coal or slack or screenings carries more. I cannot state off hand how many pounds per ton there will be in coal as it comes from a mine, because the moisture content varies greatly in different seams and

in different districts. In Illinois the majority of the coals will run around 10 or 12 per cent natural moisture although there are mines in this state which ship coal with only 1 per cent moisture. Here at our power plant the coal (screenings) as received is wetted to about 16 per cent moisture. This is not saturated but is enough to allay all dust and make the coal pack well on traveling grates. I presume the coal would hold 21 or more per cent of water. For a bituminous run-of-mine coal that would average 10 per cent water I would say that the lump would run 9 per cent and the screenings 11 per cent water. Please understand that these figures are only approximate."

Regarding the wetting of coal so that it will pack well on traveling grates, my suggestion is that the purchaser "wet the coal himself" rather than leave it to the coal dealer. Water as it comes from the city mains or from other sources of supply very seldom costs as much as \$6 to \$10 per ton.

In a small eastern city where water is higher than in most surrounding cities it is sold to the consumer at the rate of \$2.80 per 1,000 cubic ft. Even this is equivalent to a bit less than 9 cents per ton. Why pay \$10 per ton when you can get it piped to your own boiler house for 9 cents per ton?

KILLING VERMIN WITH LIVE STEAM

The North American Restaurant, Chicago, Ill., which seats 1,000 people, is employing a new method of banishing vermin of every sort from the kitchen, pantries, storerooms and service counters. The manager reports that he uses the live steam the same as that generated for the kitchen for destroying the vermin.

The method employed is somewhat as follows: Every forty feet there is attached a hose that reaches every inch of space in the establishment with this cure. The hose is about two inches in diameter. At the far end of it is a nozzle about two feet long and with a handle about half way on the nozzle, so that it can be handled without scalding the user. The steam is applied quickly in all corners, cracks, and crevices wherever vermin or eggs may be lodged. It is equally effective in killing rats and mice as roaches, ants and the like.

"I have been paying \$40 a month," said the proprietor, "for exterminator expense. A man comes frequently to rid the place with a powder or whatever way they have of doing it; but from the continual receipt of things that bring vermin to a place, the roaches and other insects breed very quickly after they are supposed to be cleaned out. Now, with the steam, the work is done by ourselves, and we are absolutely free of vermin in the North American Restaurant and its working department."—*The Hotel Monthly.*

DISPENSARIES AND OUT-PATIENT DEPARTMENTS

Conducted by MICHAEL M. DAVIS, JR., Ph.D., Executive Secretary, Committee on Dispensary Development, United Hospital Fund of New York, 15 W. 43rd Street, New York
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ADMISSION SYSTEMS FOR DISPENSARIES*

By JOHN R. HOWARD, JR., SUPERINTENDENT, NEW YORK NURSERY AND CHILD'S HOSPITAL, AND JANET M. GEISTER, R.N., NEW YORK, N. Y.

THE Committee appointed by the section on administration to study the question of admissions began its work at a meeting held May 18, 1923.

Function of Committee

It was the opinion of the committee that its function was not to study the general philosophy of admissions, but rather to study present practices, and to work out from them a practicable plan for the organization of an adequate admission system.

It was decided that the best approach to the problem was first, a study of existing systems, representative of all kinds of dispensaries, second, an analysis of the findings, third, a statement of the general principles involved in registering patients, together with an outline of the various admitting steps common to all systems.

Because of the great variety in types of dispensaries, in the size of the daily intake, and in the physical equipment, any effort to lay down a general pattern for the admitting system would be impracticable. In an institution where, for instance, only a special form of treatment is given, such as maternity, orthopedic or neurological, and where the patient is usually carried over a long period of time and where the intake is more or less controlled, the method of admitting new patients may differ markedly from that in the general institutions. The dispensary admitting less than one hundred patients a day has a problem quite different from the one admitting a thousand each day. No one pattern or set of patterns could be designed that would fit every type of dispensary.

An analysis, however, of the steps through which each

patient must pass, would make possible the application of common principles, each institution making adaptations according to its particular problems and resources.

Studies were made by staff members of the Associated Out-Patient Clinics of forty-five dispensaries and out-patient departments, representing both large and small, special and general institutions. The results of these studies were analyzed to determine: first, the steps com-

mon to all admitting systems; second, the general problems involved in these steps; third, the division of work where more than one person is engaged in the admitting process.

The accompanying chart showing these steps was prepared and was shown at the American Hospital Association conferences of 1923 and 1924 in the exhibit of the Committee on Dispensary Development of the United Hospital Fund of New York. It aroused interest and drew considerable comment from the visitors, and upon request copies were sent to many of the convention visitors representing institutions

from all over the United States and Canada.

The steps as outlined on the chart are, for the sake of convenience, arranged according to the order in which they are most frequently performed. In practice this order would be rearranged to meet the needs of each institution. While some of these steps are less important than others, each forms a definite part of the admitting process. The process of admitting patients needs to be considered as a unit; each component part must function evenly or the service breaks down. A line of patients at any point in the admitting process may be a symptom of inadequacy at any other point.

The twelve steps through which each patient passes in any type of dispensary are as follows:

- I. Patient enters the building.
- II. He is directed along his way (revisit patients

The Trail of the Patient

THE process of admitting a client to an out-patient department is concerned with every moment from the time he approaches the entrance down to the time he actually reaches the physician in the clinic. "The Trail the Patient Travels" not only determines to a large degree his personal reaction to the medical service, but may also affect the character of this service through its effect on the physicians, nurses and other staff workers. This section of the report of the committee on admissions of the superintendents' section of the Associated Out-Patient Clinics takes up the steps up to the point of medical distribution. The report will be continued in the next issue of THE MODERN HOSPITAL.

*Report of a committee of the Associated Out-Patient Clinics. The committee on admissions of the section on administration was composed of John R. Howard, Jr., chairman; Adam Eberle, M.D., Miss M. A. Gibney, George E. Halpern, Rev. George A. Metzger, Frederick Miller, Miss May M. Slaton, and Janet M. Geister, R.N., secretary.

diverted at this point).

III. Medical eligibility and placement determined.

IV. Patient's identification items taken (name, address, etc.).

V. Patient "cleared" with card index to check against previous registration.

VI. Identification and other non-medical items entered on new history sheet.

VII. Social and economic eligibility and fee rate determined.

VIII. Patient receives admission card.

IX. Patient pays admission fee (revisit patient rejoins line here).

X. Given clinic ticket numbered according to arrival.

XI. Sent to clinic waiting room.

XII. Called by name or number into clinic room.

In connection with this analysis the committee enumerated certain problems common to these steps and made recommendations for facilitating these procedures.

I. PATIENT ENTERS BUILDING

It is found, not infrequently that little or no consideration is given the patient until he actually appears before the registrar's desk. Where the dispensary entrance is not well marked, or where it is not well separated from the hospital entrance, the patient, especially the illiterate or timid patient, suffers confusion.

A line of patients waiting outside the dispensary, either before or during admitting hours, is also a not uncommon occurrence. It is undesirable to utilize a public highway as a waiting room, not only because it disturbs public travel but because of the exposure of the patient to inclement weather conditions. Some of this is due to the tendency of patients to be on hand when the doors open in order to get to the doctor early.

Other reasons are the crowding of clinic sessions into a too limited period of time, thereby bringing a heavy peak load at the beginning, a short admitting period before clinics open, especially in the large institutions; a cumbersome admitting process that keeps patients in line sometimes from twenty to thirty minutes.

In several institutions a faulty arrangement of equipment brings the admitting clerk's desk close to the door, thereby making it almost imperative for the patients to form a line out into the street. In some of the better regulated dispensaries the doorman or usher admits all patients upon their arrival, in some places giving them numbered tickets colored according to whether they are new or revisit, in others seating them in the order of their arrival.

The committee recommends:

1. That there be an entrance separate from hospital entrance and plainly marked.

2. That waiting space be provided inside to prevent line extending into the street. (For arrangement of waiting rooms see second section of report to appear in the March issue.

II. DIRECTION ALONG THE ROUTE

In the small dispensary where there is rarely a crowd about the admitting desk or entrance, it is obviously not necessary to station a full-time worker at the door to direct the patients, though it is wisdom to do so when the load is at its peak. In the larger dispensaries, however, the practice of having a doorman or usher present for the full time of the admitting period has demonstrated its value. Signs, however large, have proved inadequate in sorting out the patients for their proper lines. This individual, properly chosen and instructed, can become one of the most important administrative

factors in the dispensary. His maintenance of order assures the patient that he will be cared for in his turn, and this naturally obviates disorder or pushing.

If the admission of new and revisit patients is separate, the usher makes the division in line at the door. In questioning each new patient, or looking over the revisit patient's admission card, he learns whether the patient has come on the right day, or for other purposes than clinic treatment, such as a visit to social service or to make a payment on appliances. He removes from the line, for immediate admission, the patients who are obviously ill or the women with babies in their arms or with small children. A courteous individual at the door to meet the patient as he enters, one who is not given to the exercise of police power, exerts a positive influence in establishing the quiet, friendly atmosphere that is found in the well-regulated dispensary.

Separation of New and Old Patients

It is at the entrance that a division of the new and the revisit patients should occur. The practice of admitting both new and old patients in the same line, in dispensaries with a large attendance, is frequently responsible for the unnecessary waits, the long, slow-moving line, and the congestion of work at the registrar's desk. The new patient, at this point, has nine steps before him, while the revisit patient must stand idly behind him awaiting the opportunity to pay his fee, receive his clinic ticket, and pass into the clinic waiting room.

In the small dispensary where but one worker is concerned with the admitting process a division of this sort is not ordinarily necessary. In the larger institutions, where two or more workers are engaged in admitting, such a division could be brought about without an increase in personnel and with a considerable increase in efficiency.

The committee recommends:

That a competent usher or doorman be employed to greet the patients upon entering, and to distribute them according to their classifications, thereby relieving the registrar from unnecessary tasks and at the same time adding to the comfort of the patients.

That where more than one person is engaged in admitting, new and old patients should be separated on entrance and directed along the route.

III. MEDICAL ELIGIBILITY AND DISTRIBUTION

When the patient reaches the admitting desk he has his first opportunity to tell why he has applied for care in the dispensary. The admitting officer's first question to the new patient is "What is the matter with you? What do you want treatment for?" It is a very natural first question and is precisely what the patient wants to be asked. The patient's answer to this question determines whether he belongs in the institution or elsewhere.

In determining medical eligibility in a general dispensary the matter is comparatively simple. All applicants whose medical needs appear to come within the scope of treatment rendered by the dispensary are considered eligible. In a special dispensary, such as neurological, skin, or orthopedic, each new applicant is in some places examined by a physician especially appointed for this purpose before a decision regarding eligibility is made.

VII. DETERMINATION OF SOCIAL-ECONOMIC ELIGIBILITY

Having determined the patient's medical eligibility and before assigning the patient to a clinic, it is necessary to discuss Step VII—economic eligibility—a subject so

Follow these patients being admitted to the average dispensary

The top footsteps belong to an old patient

The bottom ones are those of a new patient

The Trail the Patient Travels

I.
Patient Enters Building

II.
Directed Along the Route

III.
Medical Eligibility Determined and Assigned to Clinic

IV.
Identification Items Taken for Index Card

V.
Identification Items "Cleared" with Alphabetical Index

VI.
Identifying and Other Non-Medical Items Taken for History Sheet

OLD PATIENT SHOWS

Plainly marked entrance — separate from hospital entrance

Space for baby carriages

Waiting space for patients who come before admitting begins

Place an intelligent guide at the entrance to:

Supervise sequence

Give preference to sick patients and to women with babies

Separate new and revisit patients

Weed out people in line by mistake (wrong day, social service cases, etc.)

Reject cases

a. If indicated services not available refer to proper agency

b. If service overcrowded give appointment for later date

c. If contagious

Keep record of rejections

a. To analyze service needs

b. To note information regarding patient's rejection

Accept cases and

a. Assign on patient's complaint to clinic indicated:

Direct to special clinics in obvious cases.

All others to general medicine for reference to medical sub-departments in all cases except surgical or non-medical specialties.

b. Assign on physician's or other clinic's reference direct to clinic indicated.

c. Assign children direct to pediatrics.

Card to contain following items as minimum:

Name

Address

No.

Sex

Age

Date

Name of dispensary

Steps IV, V, VI and VII executed at one desk, if possible, to:

Cut down waiting time and travel

Question patient but once

Insure accuracy and uniformity in recording identification data

Minimize amount of recording

Have index file immediately available to:

Check up new patients for previous registration

Avoid duplication

Check up lost or forgotten cards

Copy on history sheet data obtained at Step IV:

Insures accuracy

Saves time and effort within clinic

Place registration number on index card, history sheet, admission card

A long waiting line indicates inadequacy at some point.

An organized admitting unit with a responsible head is a real economy

Where the intake is large or clinic hours concentrated separate the new and old patients on entrance

Concentrate all clerical processes

To the Clinic Room

ADMISSION CARD

VII.
Social and Economic Eligibility
Determined.
Fee Rate Fixed

VIII.
Given Admission
Card

IX.
Pays Admission
Fee

X.
Given Clinic
Ticket

XI.
Sent to Clinic
Waiting Room

XII.
Called into
Clinic

Thoughts for consideration at each step on the road to the physician

The patient wants a comfortable journey

The dispensary wants quick, direct and safe traffic movement

Acceptance based on medical needs

Rejection only after examination and diagnosis except where private treatment obviously can be afforded.

Reject cases

- If unable to meet dispensary charges refer to social service department
- If found able to pay and asking for name of private physician, give patient approved list of private physicians.
- Keep record of rejections:
 - To analyze service needs
 - To note information regarding patient's rejection

Accept cases

- Able to pay dispensary fees
- If accepted and fee partially or wholly remitted:
 - Record rating to guide cashier
 - Note if rating is temporary or permanent

Card should contain following minimum items:

Name and address of dispensary

Name

No.

Date

Clinic time (days, hours)

Department
"Always bring this card with you."

Symbols indicating status:

Full fee

Part fee

Remitted fee

Impress patients with significance of admission card.

All dispensary fees paid at one desk to:
Cut down travel
Control cash
Simplify accounting.

Patients who lose or forget cards charged for re-admission

Every admitted patient should have ticket or receipt to show:

Proper department
Sequence number

Use waiting room seats efficiently by:

Study of peak load and rearranging hours of popular clinics

Use of ushers to distribute load

Use of one large waiting room instead of small local rooms

Patient called to clinic by number or name in order of arrival

Patient's record on physician's desk before patient announced

Facilities organized to meet a high peak for a limited period of time make for waste during the rest of the day. An appointment system permits the maximum use of facilities for all day.

Educational health posters on walls

Drinking fountains and separate toilets easily available

An analysis of the admitting scheme shows where duplication in processes and in travel occur

Select personnel in accordance with the most important part of job

closely related to medical eligibility that it is difficult to consider one apart from the other.

In the opinion of this committee, a dispensary patient is *anyone who cannot afford to pay a private physician for the treatment of which he is in need*. In other words, medical needs and economic resources must be considered in their relation to each other before a patient can be accepted for treatment or rejected. This definition is based on the modern practice of medicine, which includes not only the services of the attending physician but, when necessary, specialists' services, and supplementary aids, such as x-ray and laboratory facilities. These additional services are essential in the diagnosis and treatment of many diseases, and when the patient cannot meet the cost of them outside of the dispensary he becomes eligible for dispensary care.

Cost also needs to be treated in terms of the patient's incapacitation and the probable period of time that he will need treatment or be partly or wholly unable to earn. It also needs to be treated in terms of expenditure outside of the dispensary for transportation, diet, extra service in the home, etc. Obviously the patient with a minor laceration or illness may be well able to provide himself the treatment necessary for his recovery, while the patient with precisely the same income and responsibilities having an orthopedic or tuberculous condition, or an obscure illness requiring elaborate diagnostic and treatment aids, might be entirely unable to make this provision.

This broad method of determining who is entitled to dispensary service has already resulted in a wider clientele than is commonly accepted as belonging to a dispensary. It includes the patient able to maintain himself in health without recourse to relief agencies, but who is unable in illness or physical handicap to provide the necessary medical care. This is one reason, no doubt, why it has been possible to raise dispensary fees and make the dispensary more nearly self-supporting. For those concerned at what happens to the indigent patient when fees are increased, it may be pointed out that in the dispensary where economic eligibility is determined on such a broad basis, the patient of the lower economic group is carefully guarded against having to pay a fee that he cannot afford.

The committee believes that no patient should be rejected on economic grounds until after medical needs have been determined. This means that any applicant, except one obviously able to pay for private treatment, should receive at least one examination to determine his medical needs.

Before coming to this conclusion, the committee submitted the question to the section on medicine of the Associated Out-Patient Clinics in order to determine whether the doctor would agree that the medical needs must be settled before determining whether the patient should be accepted.

The medical section reported: "It is decided that the function of the physician is to furnish the medical data on which to determine, in connection with the patient's income and financial responsibility, his or her eligibility for treatment. The determination of this eligibility is a function of the administrative side of the dispensary; and upon a representative of this department only rests the responsibility of making this decision. It is the sense of the committee that the physician should not even go into the detail of estimating the cost of the treatment. The committee emphasizes that not alone the income and responsibility, but the kind and extent of medical service

required by certain types of cases should be learned before a patient is either accepted or refused for treatment."

The committee of the section on medicine further outlined the following points as essential medical data in determining the eligibility of a patient for dispensary care:

- "a. Diagnosis.
- b. Disability—whether partial or complete.
- c. Duration—probable duration both of disease and disability.
- d. Specialist care and specialized treatment—whether necessary—and probable cost.
- e. Probable outcome—whether disease is curable or whether gradual increase in symptoms resulting in increasing disability may occur."

Thus both the medical section and the committee on admissions agree in this view.

This committee recommends:

That social-economic placement of the dispensary applicant be determined on the basis of the patient's medical needs;

That all patients but those obviously able to pay for private treatment be admitted for examination and diagnosis;

That upon the administrative office rests the responsibility for establishing the cost basis upon which decisions are made, and for making the decision after the physician has furnished the necessary medical data.

Accepted and Rejected Cases

In making placements according to these principles the applicants fall into three groups:

- a. Those found able to pay private physician.
- b. Those found able to pay dispensary fees.
- c. Those found unable to pay dispensary fees.

(a) Frequently in the first group are found individuals who apply for dispensary care because they do not know how to select a private physician or specialist. There is also found the group who, on learning they are not eligible for dispensary care, ask for the name of a private physician to whom they may go.

Practices in meeting these requests differ, though the principle followed is the same. In some dispensaries a list is held of attending physicians who have signified their willingness to attend these patients in their private offices, and when necessary to reduce charges to the amount the patient can pay. In other dispensaries, typed or printed lists including the whole staff are available for distribution. From these lists the executive officer or some other responsible worker selects three or more names according to the locality in which the patient resides and to the special need of the patient. These names are given the patient, who is told to do his own choosing. Sometimes the entire list is given the patient from which to make his choice.

(b) For the second group no further activity is required beyond issuing the admission card.

The action in regard to the third group, for whom fees must be partially or wholly remitted, depends upon the policy of the institution. This includes patients referred by social agencies. The relationships between the outside agency and the dispensary in their work with a patient or family have an important community bearing. Both of these agencies, each with a distinctive function, are concerned with the well being of the individual under their care. Their work is strengthened if the relationships and policies affecting both of them have been clearly worked out and put into practice.

While this relationship has an aspect much broader than that of fees alone, this question needs to be settled before other matters can be considered. In determining

on what basis the social agencies' cases are to be accepted (both for admission and for treatment) it must be remembered that both agencies have assumed a certain responsibility for these individuals—the social agency for the social aspect and the dispensary for the medical. When medical relief is indicated it appears only logical that the medical agency be prepared to provide this relief.

The mere fact that an indigent patient is referred to a dispensary by a social agency is no reason for expecting the social agency to pay the cost of care. In searching for a principle to act as a guide in this matter the committee agrees that any institution maintaining a medical service supported by funds raised on the basis of free treatment to the indigent should accept the clients of social agencies on the same basis as other patients.

Whether the dispensary should accept the decision of the social agency as to the patient's ability to pay all or part of the fees is a matter for the dispensary to work out in conference with the individual agencies. A simple rule is to give free treatment at least to those receiving material relief from the social agency, and to accept the others on the same basis as all other patients.

When a remission of fees is decided upon it is found best to record (either in code on the patient's admission card or in some form where it is easily available) not only the rate that is to be paid but also the length of time the rate is to exist. Re-rating at regular intervals is found to be both practicable and wise.

The committee recommends:

That patients found able to pay for and asking the name of a private physician be given the approved list of physicians who will accept them as private cases.

That in the relations between the dispensaries and social agencies it is advisable that the dispensaries follow the same policy they pursue in regard to their individual patients. These referred patients should be full-pay, part-pay or free, on the same basis as other patients, no part of the charge for treatment being made to the agency. Those patients who are receiving financial relief from social agencies should be accepted as free patients.

That, where possible, a definite policy be worked out through conferences between the dispensaries and social agencies, whereby patients referred by these agencies be accepted without further investigation on the basis of the social agency's recommendation.

That where fees are remitted the rate be noted and a re-rating be made at regular intervals.

That a record be kept of all rejections, to include not only identifying data but reason for rejection.

THE DOCTOR OF THE FUTURE

No figure in the life of country districts and smaller communities has more endeared himself than the "doctor of the old school." The Weelum McClure of Ian MacClaren's stories has had many living counterparts in America—the general practitioner at his best, resourceful, a friend and counselor as well as a physician. Seventy-five per cent of our population are still treated by general practitioners with limited technical appliances, little or no specialization of skill and but a slight relation to medical services organized in hospitals, dispensaries and clinics. This is the estimate of Dr. George E. Vincent, president, Rockefeller Foundation, who spoke in Kansas City at the second annual meeting of the American Child Health Association. He said that the problem of the American doctor of the future comes largely down to this: "Can the general practitioner be reproduced on a high level of efficiency and can he survive under the conditions which he is likely to face?"

Many assert that his opportunities are being constantly restricted so that he will not hereafter be able to gain social esteem or even earn a livelihood. Dr. Vincent's

answer is that the underlying American philosophy of individualism finds embodiment in the general practitioner and will not let him go. It will still have need of him as a "counselor of health." Even after environment has been sanitized and communicable diseases have been subjected to public control and become rare, as, for example, typhoid fever in some areas; even though the specialist has preëmpted certain anatomic territories and pathogenic states, and the growth of institutional and preventive medicine has encroached upon the field of curative medicine, there still remains a need for the general practitioner which no specialist or hospital can fully satisfy. He is characterized by Dr. Vincent in this way:

"The well-trained, properly equipped, experienced general practitioner of ability, character and personality is fundamentally a valuable person. He is a good diagnostician. He sees his patient as a whole. He knows his peculiarities and circumstances. He can decide when to refer him to a specialist and when to protect him against the very real danger which is threatened by a narrow specialist point of view."

He may hope to survive only if he will "submit to a measure of organization and team-play in the cooperative use of laboratories and other resources," and especially if he will become a "practitioner of preventive medicine." To this end he will need a different sort of training and must assume a different attitude. He must give more attention to diet, exercise, mental attitudes, recreation, family and social life. His chief function will be that of trying to keep his patients in health and of knowing where to send them in case of accident or illness. This, of course, will require a change in the people also, for they must come to think of keeping their physical and mental machines in order, instead of awaiting break-downs and blow-outs and then making belated and expensive repairs. "The day may come," says Dr. Vincent, "when men will treat their bodies almost as wisely as they do their motor cars."—*Editorial, New York Times.*

INCREASING POPULATION OF HOSPITALS CONCRETELY ESTIMATED

Some idea of the weight of institutional dependence in the United States may be gained by stating statistics recently made public by the Department of Commerce in terms of city populations. On January 1, 1923, inmates of jails, hospitals and institutions for the mentally diseased, feeble-minded, epileptic, and other institutions for defectives, dependents, criminals and juvenile delinquents, numbered 893,679, or about the combined populations of Boston and Springfield, Mass.

The mentally defective and diseased alone showed an institutional group greater than the population of Kansas City, Mo. Nearly as many people were ill in hospitals as live in the city of Minneapolis, Minn. The reported total number of children in institutions equalled the population of Trenton, N. J.; the population in penal institutions, that of Reading, Pa.; the population of the homes for adults, that of St. Joseph, Mo.; the juvenile delinquents, that of Clarksburg, West Va. During 1922 the hospitals of the country treated nearly 5,000,000 patients in a total of more than 81,000,000 days of treatment, and the dispensaries recorded a total of 21,621,761 visits.—*Survey, November 15, 1924, page 198.*

The efforts of society to provide for the repression of the unfit types and to promote finer and more desirable types must be built around the development of habits of control that will serve society.—*Anon.*

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,

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SOCIAL SERVICE AND PUBLIC HEALTH NURSING FOR STUDENT NURSES*

BY ETHEL P. CLARKE, DIRECTOR, INDIANA UNIVERSITY TRAINING SCHOOL FOR NURSES, INDIANAPOLIS, IND.

WE HEAR a good deal, from time to time, as to the content of the student nurses' course. There are those, usually not in the nursing profession, who wish to curtail and impoverish it—because the demand for nurses is so great and they think that perhaps in this manner more will be secured in a briefer time. Others, and they include the leading nurse educators, believe that the real duty of the nursing school is to fit its students as far as possible for the responsibilities they will have to meet when they go out as graduates—and if education is to fit us for life, I can see no other aim possible.

Today the public is demanding much of the nurse, and her responsibilities are increasing with great rapidity as new and bigger pieces of work are placed in her hands. Only too often we hear that she is not fully prepared to deal with them successfully—frequently due to insufficient education before beginning the course in nursing, and to poor teaching in the course itself.

Our nursing schools should not be satisfied with their work unless they are sending out women with a far better all round development than these young women had when they entered them, and I know of nothing that will broaden them in quite the same way as some knowledge of social problems and the means of solving them.

The nurse may practice her profession in the field of private duty, in the hospital or as a public health nurse, but in each case she will need a social viewpoint. The technical side of her work, important as that is, is not all that she has to meet. She must understand something of

the human and social problems that she encounters, otherwise some of the greatest needs will not be met and her usefulness will thereby be curtailed.

It is an accepted fact that the hospital's responsibility towards its patients is not completed if the actual physical ills are the only evils they seek to cure. Difficult social situations, evils of environment, and economic difficulties

are often the biggest factors that the patient has to overcome, and it is impossible for him to reach a happy solution without trained intelligent and sympathetic aid.

Many hospitals today have a social service department, and in such hospitals every student in the nursing school should spend from four to six weeks in this department. During this time she should endeavor to forget, to a large degree, that she is a nurse and give her entire time and thought to the social side of life. It is most important that the director of the department and the instructor under whose immediate supervision the students' work is given should be trained social workers and have an understanding

of their needs. All her work must be closely supervised. She should have frequent conferences with the instructor and the necessity for complete and accurate records will need much reiteration.

It will not do to let the student have random cases to work upon, neither may they be assigned to her as they may arise. Her time is brief and it is desirable that she learn all she can and acquire as broad an outlook as is possible. Her cases should be carefully selected for her with reference to the type of problem they present, and also to bring her in touch with the various social organiza-

Need for Humanic Training

"TODAY the public is demanding much of the nurse and her responsibilities are increasing with great rapidity as new and bigger pieces of work are placed in her hands."

"The nurse may practice her profession in the field of private duty, in the hospital or as a public health nurse, but in each case she will need a social viewpoint. . . . She must understand something of the human and social problems that she encounters, otherwise some of the greatest needs will not be met and her usefulness will thereby be curtailed."

"Many hospitals today have a social service department, and in such hospitals every student nurse should spend from four to six weeks in this department. During this time she should forget, to a large degree, that she is a nurse and give her entire time and thought to the social side of life."

*Read before a meeting of the Indiana Hospital Association.

A significant fact about a cup of coffee

A little reflection will serve to remind one that the usual cup of coffee contains a therapeutic dose of caffeine . . . Here are the figures:—

“THE dose of caffeine varies from 0.06 Gm. to 0.3 Gm., or about 1 to 5 grains. A cup of the beverage made from a tablespoonful (15 Gm.) of ground coffee would contain from 0.1 to 0.2 Gm., or from 1½ to 3 grains of caffeine.”

Quoted from "Useful Drugs," an official publication of the American Medical Association

A THERAPEUTIC dose of caffeine to a cup of coffee!—valuable doubtless in certain emergencies—but surely not to be regarded as a safe family beverage.

There are thousands of physicians who have these facts daily in mind. They are in part responsible for the preference Postum enjoys in more than 2,000,000 American homes. They are the physicians who recommend Postum wherever they observe the undesirable results that follow the use

of the drug caffeine as a cerebral stimulant.

Postum is whole wheat and bran, skillfully roasted, with a little sweetening. Among its ingredients there is not one trace of the drug that is responsible for the stimulating effect of tea and coffee. Instant Postum, made with hot (not boiled) milk, is a wholesome, body-building drink for children and convalescents. Children love its distinctive Postum taste and its similarity to the hot drinks served the grown-ups.

POSTUM CEREAL COMPANY, Inc., Battle Creek, Mich.

We will be glad to send the physician who addresses us a special gift package containing a full-size package of Instant Postum, together with samples of other Post Health Products, which include Grape-Nuts, Post Toasties (Double-thick Corn Flakes), and Post's Bran Flakes.

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tions working in the city and state. Her work on these cases should be followed and guided but not to the extent that she has no opportunity for demonstrating her own initiative and resourcefulness. Give the student the case, let her take the social history herself, showing her wherein she has fallen short and let her work out the problems, guiding her a little, from time to time, so that she may draw sound conclusions.

Social Service Work for all Students

I believe that every student should have this experience—some will not enjoy it a great deal at the time and others will be thrilled at the contacts and the insight into the varying phases of life that it opens up—but each and all, if they are alert, intelligent young women, will realize that the work is a very definite factor in a well-rounded nursing curriculum which aims to prepare them to deal with their patients in a wiser and more sympathetic way because they understand at least some of the problems confronting them. When Jimmy's mother repeatedly fails to bring him to the doctor at regular intervals for examination and further adjustment of braces, the first impulse is to be impatient and perhaps accuse the mother of lack of interest and stupidity, but when the student goes into the home and finds several other little children needing constant care and perhaps an old invalid father dependent on his daughter for everything, the feeling quickly changes and the young social worker seeks to relieve the mother of that added burden by providing some means of getting Jimmy to the hospital without taking the mother away for half a day—and she is apt to leave that home with an increased respect and sympathy for the little woman who can carry so many burdens quietly, without complaint.

A number of cities have splendid public health nursing organizations and some of them have arranged to offer courses of six to nine weeks to senior student nurses, with excellent results.

The most successful method is usually for the association to have a teaching district with an office and demonstration room as a teaching center. This is the method followed in Indianapolis. The students are assigned at regular intervals from the accredited schools affiliating. They work entirely under the direction and supervision of an instructor who is responsible to the superintendent of the association.

Frequently this instructor has a class hour each morning when she demonstrates the special technic of bedside nursing in the home, showing the students how to make use of the facilities at hand, and keep their records.

The instructor assigns the cases to the students and goes with each of them in turn to the homes of the patients—teaching them to win a cordial welcome and impressing upon them the need for a high standard of work.

This is her opportunity to show them how to observe all sorts of conditions with which they come in contact, that is, defects of housing and sanitation of which there are so many in Indiana, and how to make proper and accurate note of these facts so that they may be of use to any health or social agency needing them.

Care in Selecting Teaching District

After a while she will learn that the patient she is called upon to visit is often not the only member of the family that needs help, the undernourished child, the boy retarded in school by poor eyesight, the father with a suspicious cough living amongst and fondling his children, are all likely to come within her ken and she will learn, through the instructor how each and all may be helped

—even to the little Italian mother who is loathe to give up swaddling her baby and learn American ways of living.

Such a teaching district should be selected with great care; it is desirable to have it embrace as many types of people as possible—foreigners, negroes, and native born. If there is an infant welfare station, a tuberculosis clinic, or clinics of any other type, it is so much the better—the experience will be the broader. The nurse will find prenatal and obstetrical cases, as well as surgical cases, requiring dressings. For this reason it is important that they shall have completed their operating room and obstetrical experience before being assigned to this public health work.

During the time that they are doing this field work they have to be relieved from all duty in the hospital except on Sundays. When they first report to the social service department, or the public health nursing association, a copy of their class schedule in the nursing school should be sent to the instructor and they should be expected to be present at all their classes, being released from the field for that time.

Advantages Overcome Hardship to Hospital

The objection that is usually raised to giving students this experience is that it takes them away from the hospital for so many weeks and that the hospital cannot afford to lose their services. Perhaps it is not entirely easy to plan for it, but if the hospital authorities recognize the fact that it is their duty to give to the young women who come to them as students of nursing the very best preparation for the practice of their profession that is possible, they will be able to manage it. And the hospital will receive its reward, for it is the possibility of enjoying such opportunities that attracts a fine type of educated young women to our schools, and in the broader viewpoint that such experience gives them they will be a wholesome influence on the other students.

Perhaps some will think that such work might more properly be taken after the nurses graduate, that it is not within the province of the school to make specialists and I agree that it should only be expected to give a thorough general training, just as the schools of medicine, law, and other professions do. However, I believe that this is not making a specialist of any student. The courses are far too brief for that and it is not their purpose. They are designed to develop the humanity side of their work, if I may be permitted the term, to give them a vision of the possibilities that such work offers, and to fit them better to meet the need that arises in any field of nursing for some understanding of social conditions which are frequently causative factors in sickness.

The Nurse as a Public Servant

Gradually we are learning to lean more and more upon the nurse in any program of social betterment. We are looking upon her as a public servant and it is not fair to expect her to make a winning fight against poverty, filth, ignorance, and disease, if we fail to put into her hands the weapons of knowledge and skill, without which she cannot win no matter how eager and earnest she may be. The highest ideals of mind and heart and spirit are not enough. She must know how to observe conditions, how to obtain facts and how to use these facts when she finds them, to the end that our state may be a safer place in which a baby may be born, and that the baby will stand a better chance of living to a happy healthy old age.

Why Knox Sparkling Gelatine Is Supreme for Hospital Use

1. Purity

Knox Sparkling Gelatine is superior in every way by every analysis. Made only from selected shin bones of healthy beef cattle, by the most approved methods. Free from harmful acidity or other deleterious elements. Far higher than government standards.

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Knox Sparkling Gelatine was the basis for the exhaustive scientific research and feeding tests which established the health value of pure, plain, unflavored gelatine.

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One pound package of Knox Sparkling Gelatine put up especially for hospital use, will make 288 liberal portions of desserts or salads—four times more than ready-flavored and artificially colored gelatine. Furthermore, Knox Gelatine will make fresh or canned fruit and vegetables, with all their benefits, go many times further.

1% of Knox Sparkling Gelatine, dissolved and added to milk will, because of its protective colloidal ability, increase the yield of nourishment by about 23%.

KNOX SPARKLING GELATINE

The Highest Quality for Health

Every hospital kitchen should have the new book of dietetic recipes for Diabetes, Nephritis, High Blood Pressure, Gastritis, Fevers, Obesity, as well as for invalids, convalescents and children.

In addition to the family size packages of "Plain Sparkling" and "Sparkling Acidulated" (which later contains a special envelope of lemon flavoring), Knox Sparkling Gelatine is put up in 1 and 5 pound cartons for special hospital use. A trial package at 80 cents the pound will be sent you upon request.



Charles B. Knox Gelatine Laboratories, 400 Knox Ave., Johnstown, N. Y.

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES,
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A UNIFIED DIETARY SERVICE

BY KATE DAUM, PH.D., NEW YORK, N. Y.

IN MANY hospitals the dietary system seems to have "just grown" like Topsy so that we feel that an effort to organize a unified service is somewhat of a new departure. My conception of this service is that any business which relates to food or feeding should be concentrated in a single department with an adequate staff. Full authority in all matters pertaining to the department is given to the head, and at the same time that person is made responsible for the policies, activities and accomplishments of the department. This person is directly responsible to the business management and cooperates with the medical and nursing staffs.

The advantages and disadvantages of such an organization are at once evident but, some of them are not necessarily peculiar to the hospital. This plan gives centralization of authority and responsibility. There is always a danger of developing a dictator-like executive. On the other hand, the factor of centralized responsibility is soon appreciated. For example, complaints are brought directly to me with the excuse always, that since I am head of the department I am the one most interested. This is true of course, but of necessity I relegate the handling of most cases to the assistant directly concerned.

Plan Promotes Uniform Development

Another advantage is that this system promotes a uniform development of all parts of the department and permits also the planning for future development. It seems to me, that this is one of the most important factors in stimulating good work in the department. The plans for the future which are most interesting to the group called "the help" are of course those which we are able to develop in a few months. It is interesting also to note that this future planning has led to graduate study on the part of my assistants. These plans must be well worked out, otherwise, they will be called day dreams.

The aim of the department is first, to produce and distribute to the various groups, foods which will represent the highest standard of scientific nutrition; second, to furnish corrective diets, when needed, and to contribute to the general bulk of knowledge in both normal and abnormal nutrition; third, to know the cost of all food and its distribution, in money and labor, and to make contributions to the knowledge of the scientific management of food problems.

What the System Aims to Do

"A unified dietary service means centralized authority and responsibility, recognition of the importance of the work of the department and of members of its staff, uniform development of its parts and growth as the hospital itself grows."

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The organization necessary to accomplish all this is somewhat complex. The complexity, however, is dependent upon the size of the hospital, but any hospital will show the same elements of organization and will differ only in the number of people required to make this organization function.

From the standpoint of labor, equipment and volume of product, the largest division in the department is that of routine feeding. This covers the planning, preparation and distribution of food for the medical and nursing staffs, for the various students connected

with the hospital, for the employees and for the majority of the patients. The problems connected with this division are much like the problems in a hotel.

Good food well served must be produced in fairly large quantities, at a moderate cost. Hospitals could save themselves a great deal of criticism in this department if they would employ a very good chef. It has been rather appalling to find that the kitchen worker who has been employed for any length of time in a hospital has the attitude that the food can be served in any manner, that it is "just hospital food."

Distribution of Food-Most Important Function

The question of distribution of food not only to the dining rooms, but to the wards and to the employees, seems so important to us that a member of my staff has this as her most important function. The costs of this di-



America's most famous dessert

ONLY the purest materials enter into the manufacture of Jell-O. Cane sugar, fruit juices and gelatin constitute the basis of this delectable dessert.

Hospitals and other institutions are featuring Jell-O on their dessert list. They have found Jell-O most nutritious and assimilable. When serving large numbers the Institutional package will be found most convenient and economical.



*Institutional Size
makes one gallon*

Apple Snow Jell-O—Dissolve a package of Strawberry Jell-O in a pint of boiling water. When partly cold turn into sherbet glasses, filling three-quarters full. When firm pile Apple Snow on top. To make Apple Snow, dissolve one-half package of Lemon Jell-O in half a pint of boiling water. When cool whip to consistency of thick whipped cream. Then add one grated apple and four tablespoons of sugar.

THE JELL-O COMPANY Inc.



LE ROY~NEW YORK

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vision are going to be affected by the proportion of well to sick people. In the majority of hospitals this proportion is sixty-forty. With us, it is about seventy-thirty. Control of costs through a simple system of requisitions with an adequate arrangement for emergencies is another important method of keeping costs where they are desired. A cost budget helps but we have found that a quantity budget for such things as eggs, butter, milk, cream, oranges, bread, etc., is also very valuable.

Division of Special Feeding Cases

The second division is that which takes care of special feeding cases. This includes service to the wards and certain cases among the staff and employees who are up and around. We handle obesity, gastric and intestinal cases for these last two groups. The size of this special dietary division depends somewhat upon the size of the staff and their interest and demand for it. In a teaching hospital both the medical and nursing staffs want it, and it is seldom that any hospital can afford to get along without it. This service is more expensive, for it requires more supervision, more labor, and less chance to use inexpensive food. No dietitian should be asked to establish such work without the recognition of these facts.

Division of Education

The third division is that of education. This covers the work with the student dietitian, the student nurse, the intern and, in our hospital, the medical student, and most important of all, the patient. All these groups have regular class work part of which is laboratory. We consider the class work with the student dietitian particularly important in that it is one means of keeping her in touch with advances in nutrition.

We are also trying to work out a general education policy which will teach the elements of normal nutrition to everyone who comes in contact with the department. Part of this will be indirect, and just what we accomplish is dependent to some extent upon the age of the group and upon the length of time, in the hospital. Food habits are rather difficult to change, but, we feel that a nurse after three years should have fairly well established, sensible food habits. With the employees, on the other hand, our difficulties are much greater. This group changes more often, is mature, and apt to be very prejudiced about food. Our policy is to allow a very liberal amount of milk, and the general appearance of well being and lack of illnesses justifies it.

Division of Investigation and Research

The last division is that of investigation and research, and the amount of work done here is going to be dependent upon the size and training of the dietary staff and upon the cooperation of various other departments, such as, the medical, the accounting, and the purchasing. Under this division we have put our cost accounting with the idea that the figures obtained would need careful analyses and correlation before they would be a real aid in the running of the department. To illustrate, we know not only how much we are spending each month, in fact each day, but, where this is going and what our proportions are for the various food groups. We are able to show also relative cost of fresh and canned goods, of made desserts of various kinds, etc.

Other problems which we have planned for are studies in the waste in bread and butter in the various groups and the waste in bread and butter in the same group in relation to the rest of the menu, the relation between kitchen

and table waste and the actual cost of certain dishes such as stew when the waste and consumption of bread and butter in connection with it are known. For instance, on stew-day, how many clean plates do you have coming back into the pantry. We are working out also standard proportions for our desserts and made dishes, and standard portions for the different groups.

Another type of investigation is the comparison of different types of machinery and equipment. At present if one is in the market for a piece of equipment about the only data available is from the manufacturer himself. We also do time and motion studies and I hope eventually to use these as a basis for the dismissal of employees who do not measure up.

The research field open to the dietitian is very large and even if she does not feel able to carry it on alone her intelligent cooperation and interest are invaluable to the medical staff.

In summing up, a unified dietary service means centralized authority and responsibility, recognition of the importance of the work of the department and of the members of its staff, uniform development of its parts and growth as the hospital itself grows.

CHICAGO DIETETIC ASSOCIATION ANNOUNCES OFFICERS

Dr. W. H. Holmes, Northwestern University medical school, Chicago, addressed the members of the Chicago Dietetic Association on the subject of "Intestinal Diseases," at the regular meeting held January 9.

The annual dinner of the association was held January 8.

The following officers assumed duties this month: Elizabeth Tuft, Wesley Memorial Hospital, president; Eleanor I. Dustin, Chicago Lying-in Hospital, vice-president; Vera Howard, Albert Pick & Company, secretary; and Louis Beebe, Michael Reese Hospital, treasurer.

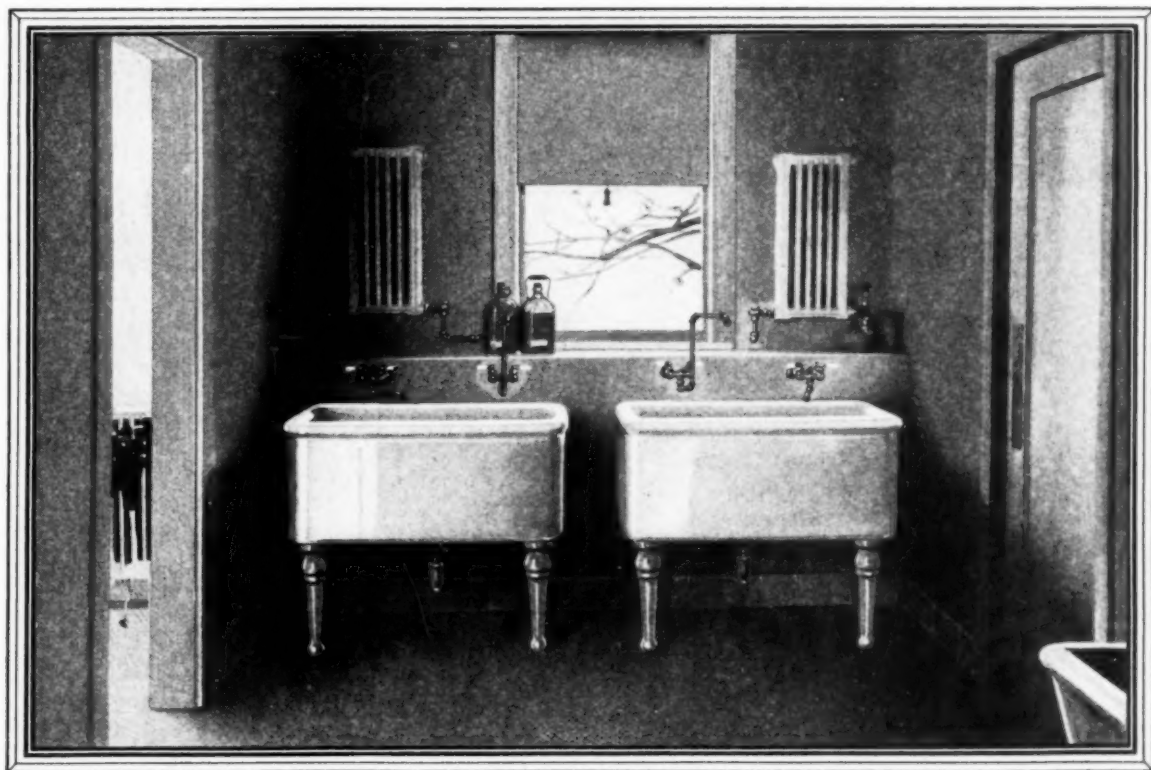
NEW OFFICERS OF MINNESOTA DIETETIC ASSOCIATION

The following officers of the Minnesota Hospital Dietitians, have been elected for the coming year. President, Grace Moreland, Northern Pacific Hospital, St. Paul; vice-president, Marion Stuart, General Hospital, Minneapolis; treasurer, Florence Alberg, Northwestern Hospital, Minneapolis; recording secretary, Joan E. Boeyink, Fairview Hospital, Minneapolis; corresponding secretary, Edna Zavitz, Northern Pacific Hospital, St. Paul.

A number of changes in the dietary departments of the hospitals in New York and vicinity have been made since the holidays. Mrs. Agnes O'Dea has left Fifth Avenue Hospital, New York, N. Y., and is succeeded by Miss Sarah Hichcox.

Mrs. Gladys McGee who has been teaching dietitian at Mt. Sinai Hospital goes to New York Eye and Ear Hospital as dietitian; Miss Anna I. Weeks, formerly of Boston, Mass., will do the teaching of dietetics to nurses at Mt. Sinai Hospital in both the classroom and in the wards; Miss Minna Roese has been appointed metabolism dietitian at Mt. Sinai Hospital. She will have charge of the metabolic work in the wards of the hospital and in the food clinic of the out-patient department.

Miss Ruth Chambers, formerly of St. Luke's Hospital, Chicago, Ill., has accepted a position with the Washburn-Crosby Co.



SURGEON'S WASHUP SINKS IN L. D. S. HOSPITAL, IDAHO FALLS, IDAHO. ARCHITECT, H. NEWTON THORNTON, IDAHO FALLS. PLUMBING AND HEATING CONTRACTOR, RALPH D. EVANS, SALT LAKE CITY, UTAH

CRANE HOSPITAL FIXTURES ARE DESIGNED BY SPECIALISTS

Specially trained engineers design Crane plumbing fixtures for hospitals. Their knowledge of hospital practice and hospital needs is first-hand. Contacts and consultations with hospital authorities all over the country broaden it. There are few Crane fixtures that do not reflect this knowledge in design and construction.

The L. D. S. Hospital at Idaho Falls, recently completed, is Crane-equipped throughout. Plumbing fixtures and fittings, heating system and piping all carry the Crane guarantee. As in hundreds of other hospitals, reliance is here placed on the work of Crane specialists. Their experience is always at your disposal.

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L. D. S. Hospital, Idaho Falls, Idaho

FIRE PREVENTION DEPARTMENT

Conducted by W. M. Krieger, Engineer,
209 West Jackson Boulevard, Chicago, Ill.

PROTECTING LIFE BY AUTOMATIC CONTROL OF FIRE IN THE HOSPITAL

IS IT feasible to provide safety from fire inside buildings? Most of the loss of life in buildings is due to fire spreading too rapidly for the inmates to escape, and this rapid spread is generally due to unsafe conditions, such as poor construction, floor openings, hazardous contents and congestion.

"Unsafe conditions" is a purely relative term, and when applied to construction we have in mind, perhaps, the average type of relatively safe building with brick walls, wooden floors, protected floor openings and fire escapes.

Experience has shown, however, that buildings of much better than average construction were not safe, and it is a fair statement that construction alone cannot accomplish even reasonable safety, unless we limit area, height and character of contents.

Superior Construction Only One Safeguard

The more one studies the subject of safety to life from the standpoint of construction alone the more one is convinced that the problem of safety is only partly solved by superior construction. Similarly, the question of exits is only a part of the problem, and, no matter how carefully worked out, may fail in its results, if other conditions are unsatisfactory.

It seems that the public has been educated along rather illogical lines: first, that buildings should not be burnable; and second, that even if burnable, the only safe place is outside. Furthermore, this leads to a very unsatisfactory state of mind on the part of the property owner. If he has a building which complies with the average conditions of safety as to construction, and provides reasonable means for the people to get out, he has done all that is required and his conscience is clear.

If there were no other solution than improvements in construction, exits and manually operated fire extinguishing devices, we could work out these features to the greatest possible refinement, consider our work completed and then say to the person who finds it necessary to go into such buildings: "We have fixed things as safe as we know how, but if there is a fire you had better get out of the building as soon as possible by means of the exits which we have provided."

Automatic Sprinkler System Available

There is a far better and infinitely more simple solution. Owing to the fact that most of our buildings are unsafe, or at least could be improved in important respects,

the problem of making most buildings even reasonably safe would be a hopeless task because of its complexity. This would be true were it not for the fact that automatic sprinkler protection is available and adaptable to all buildings.

The automatic sprinkler system offers a complete and satisfactory answer to our problem of safety to life in buildings. In a building protected with sprinklers we no longer need to tell the occupants that the only safe place is outside. They can know that they are safe inside, for the fire will be controlled in its incipency. We no longer need to make many of the changes in construction and protection which would otherwise be necessary. A building equipped with sprinklers becomes a "fire-safe" building.

Operating without human agency, ever on guard, quick to respond to the challenge of fire and its proud conquest in 35,000 battles, the automatic sprinkler system has earned for itself the premier place in the fight against life and property loss through fire. The automatic sprinkler system consists of a series of pipes close to or concealed in ceilings, and to which sprinkler heads are connected at intervals of eight to ten feet in both directions. These heads are made with a special solder which melts at about 160 degrees F., which is less than the boiling point of water. The sprinkler has a one-half inch orifice or nozzle, and a deflector and, under usual pressures, will discharge from fifteen to twenty gallons of water per minute in the form of a drenching spray over an area some fifteen feet in diameter. With such spacing of heads, and their introduction into places under stairways, in closets, in ventilating ducts, etc., there is little chance for a fire to gain headway.

To date only about 100 hospitals have been protected in whole or in part by automatic sprinklers. This means that only about one per cent of our hospital buildings have made a beginning toward adequate protection, for among these 100 institutions only a few are as yet adequately protected.

Present Unsafe Conditions

To illustrate the need for safety from fire let us attempt to paint a graphic picture of the present unsafe conditions.

It is estimated that the present loss of human life from fire in this country is from 10,000 to 15,000 persons a year, and 250,000 in the past forty years. For this same



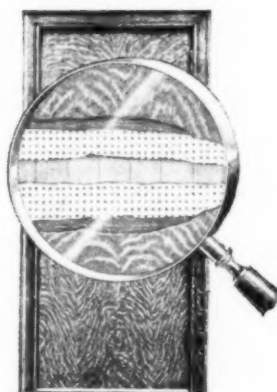
Keep your hospital homelike, but make it fireproof, too

YOUR patients stay for days, helpless in their rooms and wards. Fire protection is needed for them, but in a form that does not label itself "Fireproof." With Pyrono Doors and Trim, the home atmosphere so beneficial in convalescence, is maintained at no sacrifice of protection from fire hazard.

Pyrono Doors and Trim are built of the finest cabinet-wood veneers applied over a non-resinous, laminated core. Between veneer and core, however, is placed asbestos sheathing which is mechanically bonded to the core.

The result is a really fire-proof construction, presenting at the same time all the attractiveness of the most beautiful woodwork. Pyrono Doors can be fitted with smokeproof and practically soundproof tightness because under extremes of temperature they do not expand, contract, warp, buckle nor bind in their frames. No danger of being trapped by a jammed door.

We have an interesting booklet of important installations which we should like to send to you. May we forward it together with a folder of detail drawings?



This shows Pyrono construction magnified—the asbestos sheathing indented into the core and the cross-banded surface veneers applied over it

The Compound & Pyrono Door Company
ST. JOSEPH, MICHIGAN

Py-ro-no
TRADE MARK
REGISTERED

THE WOOD VENEERED DOOR WITH THE FIREPROOF CORE

When using advertisements see Classified Index, also refer to YEAR BOOK.

period property valued to the extent of \$7,000,000,000 has been consumed.

Those who know the conditions existing throughout this country cannot but wonder that the loss of life is not even greater. Criminal seems a mild word when we find, as I have, a number of helpless patients on the upper floors of brick, wood joisted hospital buildings of ordinary construction, with open stairs and elevators and no adequate means of escape.

We permit conditions in our institutional buildings that should not be tolerated, and one reason they are tolerated is the general impression that it is difficult and complicated to make them safe. If hospital people only realized how simple is the answer, they would exert their influence to provide for automatic control of fire.

Work of Automatic Sprinklers

Now let us look at the other picture, of what has been accomplished by automatic sprinklers in protecting life from fire. It is estimated that approximately 40,000 properties in this country are equipped with sprinklers. It is likely that there are 20,000,000 persons daily under the protection of automatic sprinklers. Sprinklers have been in use for about forty years, and during this period the average number of persons in sprinkler protected buildings has been at least 5,000,000 daily.

During the forty year period there have been perhaps fifty lives lost by fire in properties protected by sprinklers, excluding explosions which wrecked buildings. Of this small number we cannot find a single case where life would have been saved by any improvements or regulations relating to construction or protection. In these instances life was lost chiefly because the fire was so quick that clothing became ignited before the person could escape; in other words, the accident was local and the person injured or killed because of immediate proximity to the fire.

In all these years with these millions of persons congregated in buildings of all kinds of construction and used for all kinds of purposes, the automatic sprinkler has a perfect score in safeguarding life. It has accomplished precisely what it is designed to accomplish, and that is to give the maximum measure of safety to the occupants of a building. Since there are cases where buildings have burned which were equipped with sprinklers, it may be argued that loss of life might have occurred under such conditions. But the sprinkler system might have been out of order. We cannot avoid the human element entirely. We can only do what is reasonable in safeguarding any property. The chance of a serious fire in a sprinkler building is so small that in all these years it has failed to happen under conditions which resulted in loss of life.

During the past forty years there have been more than 40,000 fires controlled by sprinklers, which probably represents an economic saving of fully \$3,000,000,000. To this we may add another \$1,000,000,000 as an estimate of the probable value of human lives saved to society.

More than ten fires a day in this country are controlled by automatic sprinklers. Many of these fires occur under conditions which endanger life, and yet the slate remains clean. Against this is the almost daily occurrence of loss of life in properties not so protected.

The record of fires in sprinklered properties shows clearly the remarkable results obtained. I have combined the figures for the classes of property where a great number of persons are employed or congregate, and they show that 98.2 per cent of all fires have been extinguished or controlled by sprinklers. This is almost a perfect record.

We may have laws governing the construction, exits, and similar features of hospital buildings, and they are necessary and proper, but the practical solution of present unsafe conditions will not be found in such measures, for we cannot rebuild our many brick wood-joisted hospital buildings. We must find a remedy which is both simple and commercially feasible.

A very large percentage of all properties now equipped with sprinklers have been so equipped because of the material saving in insurance premiums. In many cases it runs as high as 70 or 80 per cent of the total insurance cost. This means that it is a good investment to install sprinklers, regardless of their value as a protection to life and property.

An investigation was made recently of the fire reports of the National Fire Protection Association to determine where fires start in hospital and school property. This investigation brought out the fact that 60 per cent of fires in these classes started in basements or working portions. While complete protection with automatic sprinklers in a combustible building is always desirable, sufficient funds frequently cannot be secured, especially at the outset, hence a wisely conceived plan of partial sprinkler protection gradually extended as funds became available, is generally advisable. Sprinkler protection should be provided in basements, storerooms and other dangerous spots. These systems should be arranged and designed so that later on they can be extended to upper floors of the building. After all dangerous basements have been protected the installation should gradually be extended.

Fire Protection as a Bequest

The time will come when men and women of means who are today giving generously to our hospitals and other institutions will, of their own initiative or at the suggestion of boards of governors, provide adequate fire protection as a gift or bequest instead of providing only for additional buildings, equipment and operating expenses. The day will come when in administration building entrance halls will be found tablets reading:

"The automatic sprinkler system, which assures those whom this roof shelters the maximum protection against fire, is the gift of John Jones, Esq., generous giver to worthy causes and long the friend of this institution."

It is our opinion that the application of automatic sprinklers to hospital buildings, where safety to life is the chief need, has but just begun.

Experience has demonstrated beyond a doubt that the automatic sprinkler system is the only feasible means of providing safety from fire inside buildings.

DEFECTIVE WIRING CAUSES TWO RECENT HOSPITAL FIRES

Two recent hospital fires, one in New York City and the other in Boston, are believed to have been caused by defective wiring. The fire in the Scobey Hospital, Boston, Mass., which occurred on January 4, cost the life of one patient and injured more than a score of others, in addition to demolishing the building. The fire was caused from a short circuit of the wiring connecting the Christmas tree.

The other fire occurred in the premature ward of the New York Nursery and Child's Hospital, New York, N. Y. on October 19. This fire is also believed to have been caused by a short circuit in an electric warming pad.

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Faith in others—to recognize superior quality and workmanship—to appreciate the true value of *Good Glass Service* makes us strive to supply at all times *Glassware of Service*.



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MEETINGS, CONVENTIONS AND CONFERENCES

MICHIGAN HOSPITAL ASSOCIATION HOLDS EIGHTH ANNUAL MEETING

ABOUT fifty delegates from various Michigan hospitals gathered at the Hotel Bancroft, Saginaw, Mich., on January 8 and 9 to participate in the eighth meeting of the Michigan Hospital Association, under the chairmanship of Dr. T. K. Gruber, superintendent, Receiving Hospital, Detroit. The first section of the conference opened at two o'clock Thursday afternoon with a brief address of welcome by Mr. C. W. Hensel, executive secretary of the Saginaw Board of Commerce. Following this address the secretary of the association, Dr. D. M. Morrill, superintendent, Blodgett Memorial Hospital, Grand Rapids, read a letter to the association from Mr. Albert W. Tausend, mayor of Saginaw, who was away from the city.

President Urges Vigilance of Legislation

In his report as president of the association, Dr. Gruber raised several points and made one or two suggestions. One of the points raised was whether the Michigan Hospital Association ought definitely to attempt to enlarge the scope of its activities or whether it would be preferable to have it remain merely a skeleton organization, prepared to meet demands that might properly be made upon it from time to time. Among his recommendations were these: That the boards of trustees of individual hospitals pay the traveling expenses of delegates to the annual meeting of the state association; that the dues of the association be reduced as a means of enlisting the interest of more hospitals; that as this was a legislative year the association be on the alert lest undesirable legislation be enacted, and that the individual hospitals sell themselves to the public.

Following the president's report, Mr. Robert Grieve, business manager, University Hospital, Ann Arbor, read a paper on "Future Activities of the Michigan Hospital Association," by the Rev. M. P. Bourke, who was unavoidably detained because of illness. As our readers know, Father Bourke is chaplain of St. Joseph's Sanitarium, Ann Arbor, and director of Catholic hospitals for the diocese of Detroit. In his paper he recapitulated briefly the work done by the association in the past and outlined a progressive program for the future. With regard to the legislative policy of the association Father Bourke recommended that the work along this line for the coming year be of a negative character and suggested that the legislative committee confine its efforts to approving commendable hospital, medical and nursing bills proposed by others and protesting objectionable ones. He

feels that, rather than more laws, fewer laws, better administered, are needed.

Suggests Michigan Hospital Handbook

The issuance of an annual Michigan Hospital Handbook is a project to which Father Bourke feels the association might devote some of its energy and some of its accumulating funds. Such a publication, he suggested, might contain the following: (1) A directory of the hospitals of the state, with bed capacity, character of hospital, indication of presence of training school, dispensary, etc., names of officials connected therewith, including the names of the active members of the staff. (2) A compilation, either in full or in part, of the Michigan hospital laws, with judicial decisions bearing upon the subjects of hospital regulation and liability. (3) The important ordinances regarding the conduct of hospitals in the larger cities of the state. (4) Statutes and board rulings of the Michigan State Board of Registration in Medicine and the Michigan State Board of Registration of Nurses and Trained Attendants. (5) Regulations of national associations in so far as they affect hospital service in Michigan, including the College of Surgeons, the American Hospital Association and the American Medical Association. (6) General information gleaned from the researches of national hospital bodies relating to operating figures, building costs, names and addresses of national officers, bibliography, etc. (7) A summary of such national laws as are required for everyday use, such as the Harrison Law, the law governing the withdrawal and dispensing of alcohol and spirituous liquors and the like.

The afternoon session closed with a round table conducted by Dr. W. L. Babcock, director, Grace Hospital, Detroit. The first question discussed related to allowances for interns. The general feeling among the hospitals represented at the meeting was that interns were entitled to some allowance. The amount of this allowance varied between \$25.00 and \$50.00 a month, the larger amounts being given largely by the smaller hospitals. Several of the larger hospitals, however, particularly the teaching hospitals, did not give their interns any allowance during the first year. If they remained a second year they were granted \$25.00; and, if they continued as first year and second year residents, \$50.00 and \$100.00 a month respectively.

Discourages Paying Interns

In the course of the discussion Dr. D. M. Morrill,

The Hospital and Acidosis

THE community health protection given by the hospital and its out-patient department, may well include education of the public toward the prevention as well as the correction of acidosis.

Acidosis is a forerunner of so many serious organic troubles that its correction or prevention comes naturally within the field of the health protection service which today is generally accepted as a part of the hospital's function. Furthermore acidosis becomes more particularly a problem of the hospital because so frequently the condition is recognized for the first time when the patient enters the institution for diagnosis and treatment of some other ailment.

Whatever may be the underlying cause the simple corrective treatment here discussed should be considered by those responsible for the treatment and care of patients in hospitals and similar institutions.

The increasing use of sodium bicarbonate by the public to control "acid stom-

ach" should be considered in this connection. Only a part of the bicarbonate is effective and that portion which produces carbon dioxide may be seriously detrimental.

Phillips' Milk of Magnesia being free from carbonates does not distend the stomach nor cause flatulence of the lower intestinal tract. Its antacid action is pronounced. A given quantity of Phillips' Milk of Magnesia neutralizes almost three times as much acid as a saturated solution of sodium bicarbonate and nearly fifty times as much as lime water. Further it has the additional merit of being laxative, a quality of importance here since constipation is so frequently the underlying cause of hyperacidity.

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The usual dose of Phillips' Milk of Magnesia, as an antacid, ranges from one teaspoonful (4 c. c.) to one tablespoonful (16 c. c.). This amount should be mixed with an equal portion of cold water or milk and given half an hour after meals.

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superintendent, Blodgett Memorial Hospital, Grand Rapids, made a plea that the hospitals disabuse their minds of the thought of paying for intern service. The old idea, he stated, was that if the hospital did not pay the intern they could not attract good men because they could not give them adequate education and practical experience. He suggested that the small amount of money that is given the intern be called a stipend or expense allowance. Grace Hospital, Dr. Babcock pointed out, gives its interns \$25.00 a month. This is not called a wage, salary or compensation. It is designated an expense allowance and is entered each month on an expense allowance voucher.

Paralleling this discussion was one relating to the question of what allowances the various hospitals were making to their student nurses.

A discussion of the question of how much training interns should be given in the administration of anesthetics, brought out the following information: In one hospital the interns give anesthetics in the forenoons for a period of three months. At first they are taught by the resident physician and later are allowed to give the anesthetics alone under his supervision or that of one of the attendings. St. Mary's Hospital, Grand Rapids, has a definite department of anesthesia under the jurisdiction of which its interns are instructed. At the conclusion of their intern year they must have administered a definite number of anesthetics, under supervision. At Grace Hospital, Detroit, training in the administration of ether by interns is made obligatory. Training in the administration of gas and ethylene may be taken voluntarily later. Grace Hospital, as is generally known, conducts a post-graduate school for training in anesthetics.

Preventive Measures Against Purloining

A question that constantly recurs at state hospital meetings and which came up again at this meeting is how best to prevent the purloining of silverware, linen, electric fans, etc. One hospital has definitely adopted the policy of charging electric fans to the occupants of private rooms and getting a release of the fan on the patient's discharge from the institution. Another hospital has adopted the policy of requiring an O. K. on all packages taken out of the hospital by its employees. One institution which has a central serving room has made one employee in that serving room responsible for the return of the silverware after each meal. It was generally felt that the exchange system, under which broken and injured pieces of equipment are presented at the storeroom when new equipment is requested, and a frequent check-up of supplies, was the best method to pursue.

In a discussion of how best to acquaint part-pay patients with the fact that they are not paying the full cost of their treatment and consequently make them duly appreciative of the fact that they are not paying for all they receive, Dr. Babcock stated that Grace Hospital used a poster two or three paragraphs long which is attached to the bills of part-pay patients. Mr. S. G. Davidson, superintendent, Butterworth Hospital, Grand Rapids, suggested that instead of publishing elaborate and expensive annual reports hospitals would do better to get out more frequently less expensive pamphlets telling what the institution is really doing. One of the Saginaw hospitals takes occasion to speak personally regarding this matter to its part-pay patients.

Following Thursday afternoon's session tea was served by the Saginaw hospitals to the delegates and their friends on the mezzanine floor of the hotel.

Thursday evening's session was opened by an address by Dr. L. LeFevre, president, Michigan State Board of

Registration in Medicine, Muskegon, on "The Duty of the Hospital Staff to Its Interns." Dr. LeFevre pointed out that the state board had adopted a resolution making it compulsory for every medical student to take an internship of one year before he could practice medicine in the state of Michigan. Beginning with 1926 every medical student will be required to take an examination conducted under the auspices of the State Board of Registration in Medicine at the end of his internship. This examination will be practical, clinical examination conducted by capable clinicians picked by the State Board of Registration in Medicine. The intern must pass this examination and present a certificate from the superintendent of the hospital in which he served his internship that he has had a rotary service in the four principal divisions of hospital work, namely, medicine, surgery, obstetrics and laboratories, before he will be licensed by the board.

This plan means added work for the individual hospitals and their medical staffs. Upon the latter devolves the responsibility of giving the interns such lectures and demonstrations during the year as will enable them to pass the examination set by the state board. Dr. LeFevre pointed out that if the interns in any number cannot pass the board's examination, the hospitals in which they served will have great difficulty in getting interns in succeeding years.

Definite Schedule for Intern Teaching

In discussing Dr. LeFevre's paper, Dr. Babcock pointed out that Grace Hospital has recently established a definite schedule for the practical teaching of its interns. There the keynote of the practical training of interns is centered in the medical staff. The scheme which they have adopted eliminates all didactic teaching on the assumption that the student received a good academic background in the medical school. Not all the members of the medical staff of Grace Hospital are required to teach interns but only the men qualified to teach are assigned to teaching responsibility. In addition to the schedule of bedside teaching interns are given instruction in the treatment of diabetes and training in making autopsies. They are also obliged to assist the chiefs in the out-patient department. So far as possible this instruction is centered around patients.

Dr. LeFevre's paper was followed by one on "The Supervision of Intern Service," by Dr. Stephen O'Brien of St. Mary's Hospital, Grand Rapids. Several valuable suggestions were contained in this paper regarding intern service at St. Mary's Hospital. Last July the hospital inaugurated a new case record system, and an individual summary card for each patient was assigned to the intern in that particular service. On this card the intern checks each thing he does for the patient. He carries the card with him until the patient is discharged. This card serves as a check upon the patient, the attending physician and the intern himself.

Daily Check on Interns

By this system of daily checking of the work of the intern, Dr. O'Brien explained, the hospital has at the close of the month a summary of the work accomplished. The intern is required to take all his cards for the month and make a final monthly record. These monthly records are mailed out to the medical schools from which the intern came and the school thus has the intern's own record of what training he is getting in the hospital.

Another feature of St. Mary's intern training is the round-table discussion of cases, mortality records and academic subjects, held semi-monthly for staff members

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Pituitary Liquid, $\frac{1}{2}$ c. c., 1 c. c. ampoules.
Suprarenalin Solution, 1 oz. g. s. bottles.
Corpus Luteum, true substance.
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and interns. This plan has been found to improve the quality of hospital records, to give the intern contact with older men and to allow him to present the cases he has worked up and diagnosed, and to defend his diagnosis and treatment.

Regular staff meetings are held once each month at which scientific programs are presented. A weekly meeting with the head of the department of roentgenology has also been arranged at which interesting material in the x-ray field is discussed.

After they have had sufficient training, St. Mary's allows its interns, under the supervision of staff men, to do minor and, in some cases, major operations in its clinics. Dr. O'Brien's paper will be published in full in a later issue.

Pleads for Material Welfare of Nurses

In the absence of Miss Elizabeth Watson, R.N., instructor of nurses, Blodgett Memorial Hospital, Grand Rapids, her paper on "The Responsibility of the Hospital to the Student Nurse," was read by Miss Adelaide Northum, state inspector of nurses. Miss Watson's paper dealt with the responsibility of the hospital for the material welfare and comfort of the student nurse, for her mental well being and for adequate teaching facilities.

Thursday evening's session concluded with an extremely interesting presentation of a case of foreign bodies in the stomach, by Dr. J. D. Bruce, Saginaw General Hospital, Saginaw.

Friday morning's session was devoted to a discussion of "Deep X-Ray Therapy as a Hospital Problem," and the question of the treatment of diabetes. The first address was read by Dr. Preston M. Hickey, professor of roentgenology, University of Michigan, Ann Arbor; the latter paper by Dr. Bruce C. Lockwood, professor of clinical medicine, Detroit College of Medicine and Surgery, Detroit. Dr. Hickey protested against placing the x-ray suite in the basement of the hospital, contending that it should be centrally located in order to be readily accessible both to the patients and the medical staff. He felt that the dark room should be especially well ventilated and have a window that could be opened when the room was not in use. Dr. Hickey expressed the opinion that the treatment of cancer was the most important problem facing the medical profession today, owing to the prevalence of the disease and the paucity of facilities for its treatment.

Limitations of X-ray in Cancer Cure

He pointed out that the x-ray was helpful in the treatment of superficial cancer of the skin and lip and that during the war when the Germans were developing the use of higher voltage running from 180,000 to 200,000 volts, for energizing x-ray tubes for the treatment of cancer in the deeper regions of the body, physicians were encouraged to believe that deep x-ray treatment could be regarded as a cure-all for cancer. As a result, many hospitals installed elaborate x-ray equipment in the hope of curing all cancer. In his opinion, while deep x-ray treatment has marvelous cures to its credit, it has not realized all that was expected. Certain new growths may yield to it and it can to great advantage be used as an adjunct to surgery.

Classifying hospitals into three groups with reference to their size, Dr. Hickey felt that only the larger hospitals situated in centers of population should undertake the installation of elaborate deep therapy instruments, having the latest type of water cooled tubes. Medium sized hospitals, in his opinion, might well install a com-

bination apparatus adapted either to deep therapy or radiography. He did not feel that the smaller hospitals, where only occasional cases were cared for were justified in installing x-ray equipment. Dr. Hickey stated that roentgenologists do not think that deep x-ray therapy can best be carried out in hospitals rather than in the private offices of physicians, and that where deep x-ray therapy is indicated on surgical cases it can safely be postponed until the patient is ambulatory. If concurrent treatment is indicated, the x-ray treatment should be given immediately before the surgical operation.

Historical Resume of Diabetes Treatment

In speaking on diabetes Dr. Lockwood gave a historical resume of the treatment of diabetes and stated that the practice now was to give the diabetic patient a diet which does not overfeed him but which is usually ten to twenty per cent below his caloric requirements. At the beginning of treatment the diabetic should be given a low protein diet, with from five to ten units of insulin just before meals. Later, as the patient becomes sugar free, it may be given in one dose once a day, once in two or three days or once a week. A diabetic patient, knowing that he must take insulin the rest of his life should develop a philosophy toward his handicap, just as an individual does who has lost a leg or an arm.

Referring to the training of the intern, Dr. Lockwood made a plea that the interns be required to write out their diet prescriptions, specifically in the form of food to give the patient, instead of in terms of protein, carbohydrates and fats.

The morning session concluded with a brief talk by Mr. S. G. Davidson, superintendent, Butterworth Hospital, Grand Rapids, urging members of the association to join the American Hospital Association.

Following an early adjournment of this session, automobiles were provided by the Saginaw hospitals to take guests on a trip to several of the manufacturing plants and hospitals of Saginaw. The delegates went at twelve o'clock for luncheon at the Saginaw General Hospital, after which they returned to the Hotel Bancroft for the concluding afternoon session at which Mr. George Phillips, superintendent, Herman Keifer Contagious Hospital, Detroit, read a paper on "Contagious Hospitals and Their Value to the Community."

Dr. Warner Remembered in Legislation

At the business session of the association an appropriate resolution was passed on the death of Dr. A. R. Warner, executive secretary of the American Hospital Association.

The delegates voted to have the next meeting of the association at Detroit. The following officers were elected: President, Dr. Stephen O'Brien, St. Mary's Hospital, Grand Rapids; first vice-president, Dr. W. L. Quennell, superintendent, Highland Park General Hospital, Highland Park; second vice-president, Miss Amy Beers, R.N., superintendent, Hackley Hospital, Muskegon; third, vice-president, Miss L. W. Seckinger, superintendent, W. A. Foote Memorial Hospital, Jackson; secretary, Dr. D. M. Morrill, superintendent, Blodgett Memorial Hospital, Grand Rapids; treasurer, Miss Ann Schill, R.N., superintendent, Hurley Hospital, Flint; trustees, Dr. Stewart Hamilton, superintendent, Harper Hospital, Detroit, Dr. T. K. Gruber, superintendent, Receiving Hospital, Detroit, Dr. H. A. Haynes, superintendent, University Hospital, Ann Arbor, and Mrs. K. Hard, superintendent, Saginaw General Hospital, Saginaw.



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Conducted by HERMAN SMITH, M.D., Superintendent
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THE CONSTRUCTION AND MANAGEMENT OF AN OXYGEN CHAMBER*

By CARL A. L. BINGER, M.D., HOSPITAL OF THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH, NEW YORK, N. Y.

THE description which follows is that of a chamber recently installed at the Hospital of the Rockefeller Institute, New York, N. Y., for the purpose of treating and studying patients suffering from lack of oxygen. Since the value of oxygen as a therapeutic agent has now been placed on a scientific basis, it seems desirable at this time to give in some detail an account of the construction and management of this chamber. The general desiderata which were sought for were three:

- (1) Simplicity of operation.
- (2) Economy of operation.
- (3) Safety from fire risk.

In building a chamber of this kind it is unlikely that one pattern will serve as an exact model for others. Its location and size must depend upon the conditions at hand and the uses to which it is to be put. Improvements, especially in the arrangements of the doors and the ventilation system will undoubtedly suggest themselves. In publishing this, therefore, it is our hope that others contemplating the construction of a chamber will profit by our mistakes as well as by our suggestions.

Size and Location of Chamber

The chamber is housed in a room eighteen by twenty-four feet (432 square feet) which is entered from one of the hospital corridors. This room has a southern exposure and four windows. The number of square feet of floor space in the room occupied by the chamber and its ventilation system is approximately 142. The interior of the chamber (exclusive of the vestibule) is ten by ten

by eight feet in width, depth and height, respectively. Its total cubic content is therefore eight hundred cubic feet (22,400 liters or 22.4 cubic meters). The cubic contents of the ducts, scrubber and refrigerator make approximately an additional twenty-five cubic feet (700 liters or 0.7 cubic meters).



Figure 1. View of chamber from east: (a) wide door through which bed can be rolled; (b) panic bolt; (c & c') doors to vestibule; (d) wet and dry bulb thermometer; (e) food lock; (f) speaking tube; (g) refrigeration and scrubbing system. (See figure 5.)

The chamber is made of two thicknesses of eighteen gauge sheet steel separated by a layer of five-sixteenth inch asbestos board. The purpose of the board is to give the sheet steel greater rigidity. Plate glass windows are appropriately placed in the walls to give the maximum of light from the southern and eastern exposures. The joints at the corners and at junctions between glass and metal are filled with a non-hardening cement. The floor is of a asbestos composition which hardens to form a smooth and durable surface. The ventilation duct system is made of galvanized iron rectangular ducts one square foot in cross section.

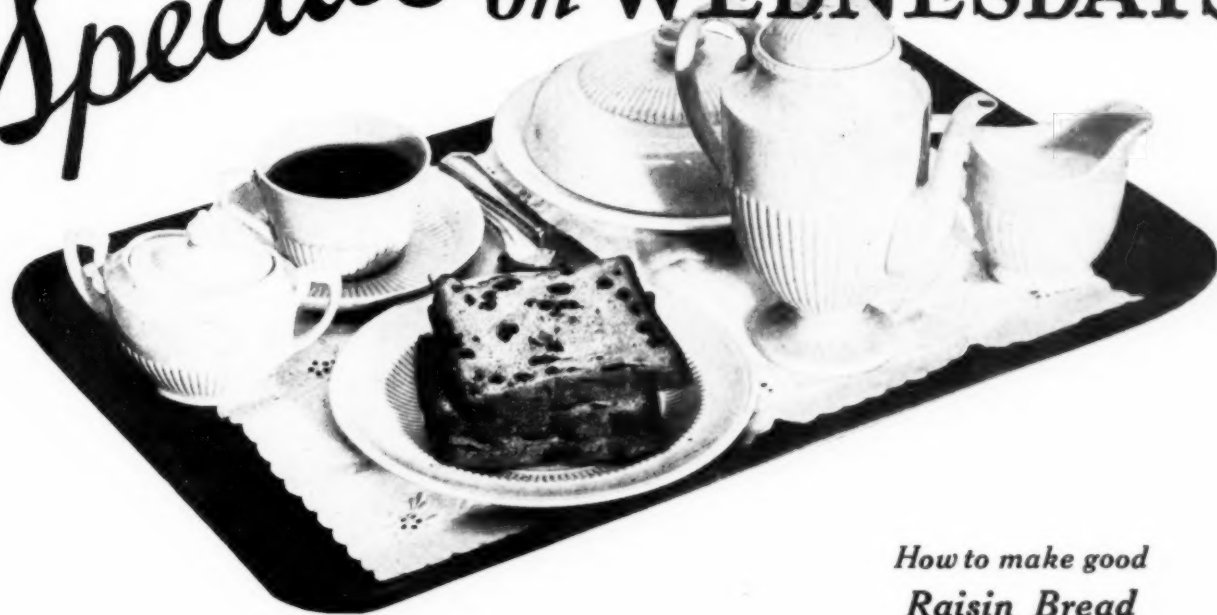
Part of this duct system is lined with asbestos felt for the purpose of absorbing sound waves emitted by the circulation fan. The refrigerator pipes are part of the hospital system. They supply brine to galvanized iron coils enclosed in a copper box well insulated with cork. All oxygen feed pipes are of iron.

Fire Risk and Fire Precautions

To our knowledge, at least two oxygen chambers have been destroyed by fire—one in England and one in this country. The fire in England was due to the lighting of a cigarette in the chamber and setting fire to combustible materials within it. The fire in this country was due to sparking or defective insulation of a motor placed within the chamber. It should be remembered that oxygen itself does not burn and is non-explosive. It

*The author wishes to acknowledge his indebtedness to Mr. Edrie Brooks Smith, business manager of The Rockefeller Institute, for much valuable help in planning this chamber.

In the best hospitals, too — *Special* on WEDNESDAYS



JUST as in homes all over the land, in hotels, restaurants and clubs, hospitals everywhere now serve Raisin Bread *special* on Wednesdays. Many patients expect it; all appreciate it.

And what custom better deserves the approval of hospital authorities?

Raisins not only add new goodness to bread, but they add a new measure of healthfulness. Stored up with their flavor is energy that's quickly released. Their mineral content is established and they supply "roughage."

Serve raisin foods often and Raisin Bread *special* on Wednesdays. Use the recipe given here or get it from some local baker who makes a quality raisin loaf. He bakes it *special* every Tuesday night.

How to make good Raisin Bread

- 1½ lbs. Granulated Sugar
- 12 oz. Butter
- 12 oz. Lard
- 2½ oz. Salt
- 12 oz. Yeast
- 8 Whole Eggs
- 3 Pints Milk (Fresh)
- 3 Quarts Water
- 16 lbs. Flour
- 16 lbs. Sun-Maid Seedless Raisins.

(Equal weights of flour and raisins are used)

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Figure 2. Interior of chamber viewed through wide door on east wall. (a) window in south wall; (b & b') dampers of outflow ducts; (c & c', d & d') dampers of inflow ducts; (e) thermostat; (f) plug for electrocardiogram; (g) chain for bell signal; (h & h') automatic sprinkler heads.

does, however, very actively support combustion with the result that inflammable materials may burn with such rapidity and violence in an oxygen-rich atmosphere as almost to simulate an explosion. Furthermore, certain substances (linoleum, for example) which may burn with difficulty in air will flare up into a lively flame in oxygen when merely touched with a match. The moral from this is that even though combustible materials, such as mattresses, bed clothes, attendant's clothing, may be present in an oxygen chamber, *there must be absolutely no source of ignition in the chamber itself.* For this reason we have permitted no electric wiring to penetrate the walls of the chamber.*

The three lamps which form the artificial illuminants are all placed without the chamber and shine into it through glass windows. Furthermore, the motor is outside of the oxygen system and propels the fan by means of a shaft which enters the fan housing through a stuffing box. There is thus no danger from sparking of the armature brushes. The possibility of heating of the shaft bearing and stuffing box, which in the presence of oil and an oxygen-rich atmosphere might be a source of danger, has been avoided by arranging that the air which enters the fan housing comes directly from the refrigerating box and in this way the fan housing and the stuffing box are automatically kept cool.

No Hot Bearings

Even with the fan running continuously for a week at a time there has never been a hot bearing. It is never more than "hand warm." Therefore, it was not necessary to find a non-inflammable lubricant, which would be difficult to do, for even graphite and glycerine will burn in the presence of high oxygen concentrations. We use a light motor oil for lubricating the bearing. However, if the bearing were to heat and the oil ignite, there would be no hazard, as there is nothing else combustible in this part of the ventilating system which is well removed from the chamber itself. In general, the combination of oil and high pressures of oxygen must be avoided, as with compressed oxygen, oils may ignite even at ordinary tem-

*The only wire penetrating the chamber wall is a dead wire leading to a string galvanometer four stories above.

peratures. For this reason oil should never be used on oxygen tank heads. Many accidents have been caused by applying oil to the thread of pressure gauge couplings. To avoid this error, we have placed an appropriate sign near the oxygen tank. Similarly, all pipe joints in an oxygen system should be set in litharge and glycerine rather than in white lead or other oil containing medium. We have taken this precaution. Another precaution is a sign placed in the vestibule of the chamber with the following legend:

DANGER!

"NO MATCHES, ALCOHOL LAMPS, FLASH LIGHTS OR OTHER SOURCES OF COMBUSTION ALLOWED IN THIS CHAMBER."

It is, of course, impossible to have all the contents of the chamber non-combustible. Fire-proofing of bedding is not a practicable procedure, as the fire-proofing liquids are not effective in the presence of high oxygen concentrations, and asbestos fabric is not suitable. There is, however, no need of such extreme precaution. In general, as little combustible material as possible has been introduced into the chamber. The furnishings are all of metal and the paint used in the interior of the chamber was of a lead base ground in Japan, thinned with turpentine rather than oil, so that when dry it left a surface which would not burn even in high oxygen concentrations. The possibility of accidental fire on the outside as well as the inside of the chamber must be borne in mind, and hence the desirability of having the amount of combustible material as small as possible. Two additional fire precautions have been introduced: (1) an emergency "panic bolt" such as is used on theater doors. This opens the main door of

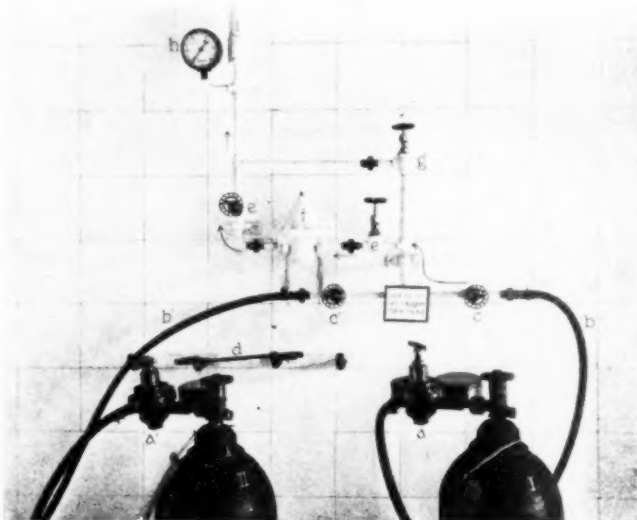


Figure 3. Oxygen supply system. The manifold is built against the east wall of the room, 15 feet from the east wall of the chamber. (1 & 2) Oxygen tanks each containing 220 cubic feet of oxygen*; (a & a') high pressure reducing valves; (b & b') pressure tubing; (c & c') globe valves; (d) wrench; (e & e') globe valves; (f) low pressure reducing valve; (g) globe valve to emergency by-pass which is ordinarily kept closed; (h) pressure gauge; (i) 1 inch conduit (for its continuation see figures 4 and 5).

*Only one tank at a time is used. The other is connected and ready to supplement the empty one. With Tank 1 open the flow of oxygen is as indicated by the arrows.



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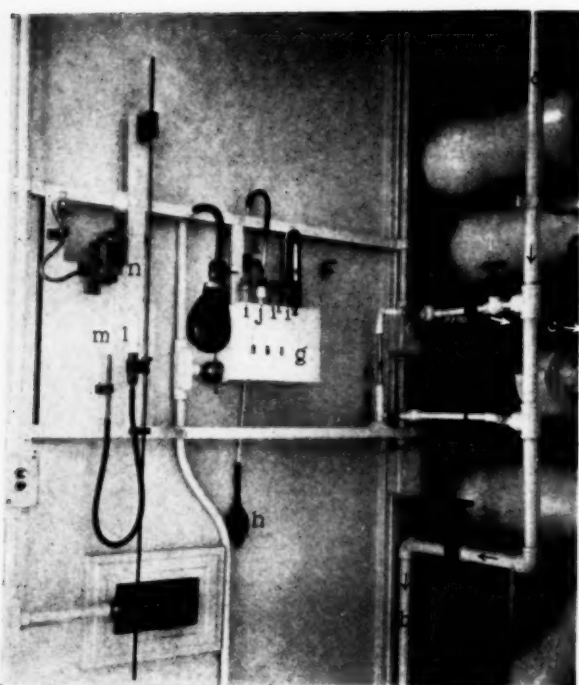


Figure 4. Portion of north wall of chamber showing oxygen control system and carbon dioxide and oxygen analyzers. (a) 1 inch oxygen conduit, the continuation of (i) in figure 3; (b) continuation of charging conduit running to lower northeast corner of chamber; (c) oxygen maintenance conduit which enters inflow duct above fan outlet; (d) needle valve for adjustment of oxygen supply; (e) flow meter with bobbin showing a flow of 5 liters per minute; (f) emergency by-pass ordinarily closed; for charging the flow is in the direction (a) to (b); for maintenance the flow is in the direction (a) to (d) to (e) to (c).

Carbon dioxide analyzer—(g) comparator box; (h) aspirating bulb; (i, i', i'') tubes containing standard phosphate solutions; (j) tube containing bicarbonate solution through which chamber air is aspirated; (k) tap through chamber wall. The analysis is made by sucking air through the bicarbonate solution and comparing its color with the colors of the standard phosphate solutions. The indicator used is phenolsulphonphthalein.

Oxygen analyzer—(l) Leveling bulb containing acidulated water; (m) burette calibrated into 100 parts: 100 at the top, 0 at the bottom; (n) three-way tap; (o) vessel containing cylinder of copper mesh; (p) reservoir containing equal parts of distilled water (saturated with ammonium chloride) and concentrated ammonia; The solution is covered with a layer of paraffin oil to retard volatilization of ammonia. The analysis is made by turning the three-way tap to connect with the chamber and lowering the leveling bulb to fill the burette with 100 parts of chamber air. The tap is then turned to connect with the vessel containing the copper mesh. By raising the leveling bulb the air is forced into this vessel where contact with copper ammonium salts removes oxygen quantitatively—after 1 to 2 minutes' exposure. The gas is then returned to the burette by once more lowering the leveling bulb and the volume read directly in terms of oxygen per cent.

the chamber automatically from within when pressure is exerted on the bolt; (2) two automatic sprinkler heads projecting into the chamber through the roof.

No Danger from Active Sources of Ignition

We have dwelt at some length on the matter of fire risk, partly because of its actual importance, partly because of some misapprehension which exists about it. With active sources of ignition, such as sparks and matches, excluded from a chamber, there should be no danger. Additional precautions such as we have added, though perhaps not essential, are desirable and advantageous.

Since the chamber is essentially a closed system, it is necessary to recirculate and purify the air. We know now that "pure air" means not only air in which the gases present are those of outside air and in relatively similar proportions, but air which is cool and dry and in motion. In an ordinary room the untoward physiological effects of vitiated air are due much more to warmth and high humidity and lack of motion than to any deficiency in oxygen or increase in carbon dioxide concentra-

tions. A closed system, however, differs from an ordinary room in that removal of carbon dioxide must be provided for as well as regulation of warmth and moisture. The ventilation system we have installed aims to accomplish this.

How an Adequate Circulation Is Effected

The air is set in motion by a No. 1-1/4 squirrel cage fan which is driven by a shaft attached to a one horsepower direct current motor capable of making 1,700 revolutions per minute, the shaft entering the fan housing through a stuffing box. Under working conditions the speed of the motor is very much reduced by means of a rheostat, the speed ordinarily employed being 700 revolutions per minute. This fan sucks air from the chamber through the ventilation ducts, the air passing first through a scrubber containing soda lime for removal of carbon dioxide, whence it passes into the refrigerator box for cooling and drying. We have depended wholly upon chilling for the removal of moisture.

The refrigerator box contains four banks of coils through which cold brine is pumped from the hospital refrigerating system. The flow of brine through the coils is controlled by a valve operated by compressed air and regulated automatically from within the chamber by a thermostat. This thermostat opens and shuts the brine valve and thus maintains practically a constant temperature in the chamber, regardless of the temperature in the outer room. The following list of wet and dry bulb readings and relative humidities for twenty-four hours shows that the atmospheric conditions can be kept relatively constant.

TABLE I

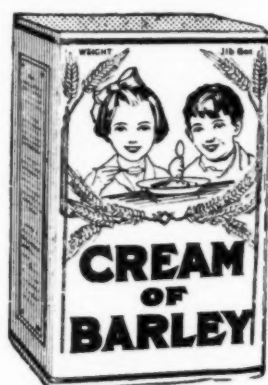
Date	Time	Dry bulb	Wet bulb	Relative humidity
Oct. 5	2:30 p.m.	68	60	62
	4:30	67	60	66
	6:30	67	59	62
	8:30	68	62	71
	10:30	68	64	80
Oct. 6	12:30 a.m.	68	58	54
	2:30	68	64	80
	4:30	70	66	81
	6:30	68	62	71
	8:30	67	64	85
	2:30 p.m.	66	55	53

Even during the month of August, when the room temperature was between 80° and 90° F., it was possible to maintain an even temperature between 66° and 68° F. in the chamber.

Carbon dioxide removal is a more difficult problem. It is possible to keep the carbon dioxide down as low as 0.2 per cent, but to do this continuously requires a good deal of soda lime which is expensive. There is, however, at least in treating pneumonia patients, probably no contraindication for letting the carbon dioxide mount as high as 2 per cent. Under these conditions much less soda lime is required and the cost of operation is correspondingly less. We have frequently allowed the carbon dioxide to reach this level with no discomfort to the patient or attendants. The scrubbers consist of two cylindrical canisters, each 1 foot in diameter, in which soda lime (Dewey & Almy, 4-8 mesh) is placed in approximately 6-inch layers.

Oxygen Supply System

The chamber is charged with oxygen from high pressure tanks. Each tank contains 220 cubic feet of oxygen under 2,000 pounds pressure per square inch. Figure



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in the
Eating"*

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three shows the arrangement of the oxygen feed system and the direction of oxygen flow. To each tank is attached a high pressure reducing valve. These valves are capable of reducing the pressure from 2,000 pounds per square inch to a range of pressures varying from 0 to 50 pounds, according to the set of the valve seat. At these pressures it is quite safe to lead the gas through rubber pressure tubing which makes a flexible connection, thereby greatly facilitating fastening and unfastening the reducing valves. The object of using two tanks is simply to save delay in replacing an empty one, only one tank at a time being in actual use.

The pressure is further reduced by a low pressure regulating valve. Once set, this valve needs no further manipulation. It is designed to maintain constant low pressures, despite a progressive fall of pressure in the tank. The pressure maintained by this valve is indicated on a gauge. This is the pressure at which the oxygen flows through the conduit leading to the chamber. The tanks stand against the east wall of the room, fifteen feet from the chamber. The conduit is led along the ceiling of the room to the chamber.

Course of Oxygen Flow

The oxygen flow enters the ventilation system above the outflow of the ventilating fan. It passes first through a simple flow meter where the flow can be directly read in liters per minute and controlled by a needle valve. With a constant head of pressure in the conduit and a constant aperture at the needle valve, a constant rate of flow may be permanently maintained. The flow is arranged to compensate for oxygen loss due to consumption and leakage, the chief source of loss being due to opening the doors of the vestibule. A flow of from five to ten liters per minute is ample to maintain a constant concentration at the levels usually employed, that is, 40 to 50 per cent. This means the utilization of one tank every twelve to fifteen hours. To charge the chamber to a concentration of 40 per cent (twice atmospheric) one tank is required. For charging, the oxygen is run in not through the meter but through a pipe which enters directly into the lower northeast corner of the chamber. During charging a valve which is placed at the corner diagonally opposite is opened to allow the air in the chamber to be displaced.

Analytical Methods

The methods for analysis are exceedingly simple. Both oxygen and carbon dioxide analyses require no more than two minutes each. The methods are described in the legend under figure 4. The carbon dioxide method is a modification of one devised by Higgins and Marriott¹; the oxygen method a modification of Hempel's². The following series of analyses shows how constant the concentration of oxygen in the chamber may be kept:

Time	Oxygen per cent
8:35 a. m.	46
11:00	40
2:30 p. m.	38
4:45	38
6:00	35
9:45 a. m.	41
2:00 p. m.	41
6:30	39
9:40 a. m.	40

Management of a Case

It was stated at the outset that one of the three desiderata which we had in mind in designing and con-

structing this chamber was simplicity of operation. The result has been that the management of the chamber requires no special technical skill on the part of the nursing staff. It should be remembered that in general only very sick patients are put into the chamber and that they, therefore, usually require a special nurse, but the special nurse is needed primarily because of the patient's condition and not because the patient is being treated in the chamber. It is our practice to keep one nurse in constant attendance in the outer room. This nurse enters the chamber and stays in it as the needs of the patient dictate. The question is frequently asked: "What effect does the oxygen have on the attendants?" There is no evidence that it has any effect in the concentrations ordinarily used, that is, up to 60 per cent. Laboratory experiments performed on rabbits³ have indicated that concentrations higher than this may be irritating to the respiratory tract. The author has on several occasions slept in the chamber containing 40 per cent of oxygen with no discernible effect on his well being.

The patient selected for treatment is moved to the chamber from the ward in his bed. This is rolled into the chamber through the wide door. This door is then shut and remains so until the patient is removed from the chamber. The emergency bolt can open this door from the inside in case of need. All further ingress and egress is through the double doored vestibule. Nurses are instructed not to carry articles into the chamber, as two

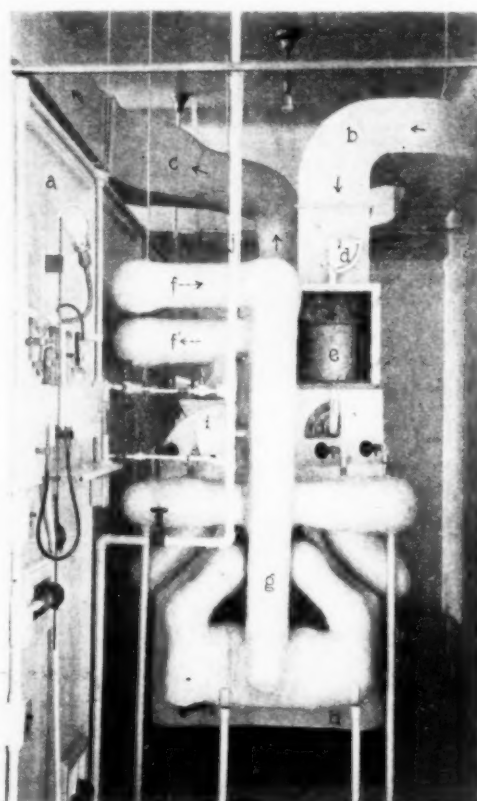
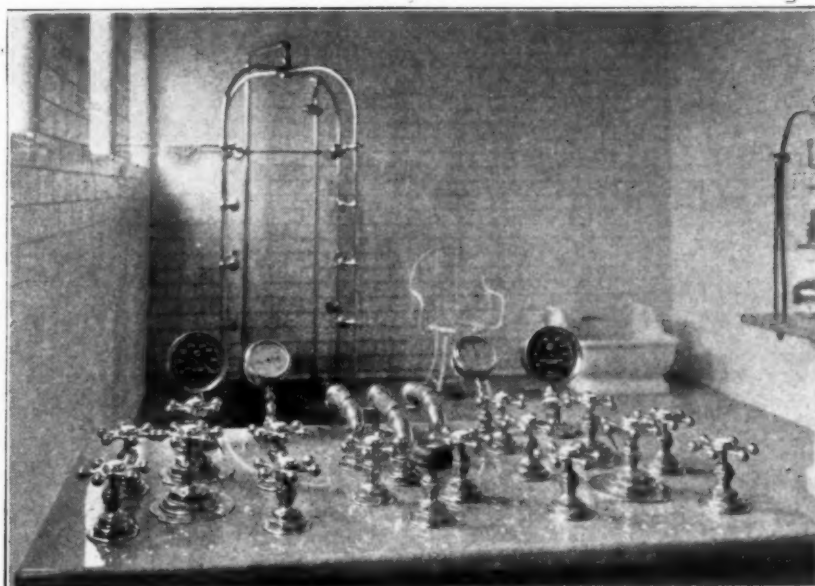


Figure 5. Refrigeration and scrubbing systems viewed from the east. (a) North wall of chamber shown in figure 4; (b) outflow duct through which air is sucked out of the chamber; (c) inflow duct through which air is forced into the chamber; part of this duct is lined with asbestos felt to absorb sound waves (the arrows show the direction of the air current); (d & d') dampers to scrubber; (e) canister for soda lime (the scrubber door has been removed to expose the canister to view). (f) feed pipe for brine; (f') return pipe for brine (the broken arrows show direction of brine flow); (g) brine pipes leading to refrigerator box; (h) refrigerator box; (i) valve for brine pipes operated automatically by thermostat; (j) oxygen feed pipe. The motor, which is not shown in the photograph, is on the west side of the refrigerator box.

1. Higgins, H. L., and Marriott, W. McK., *Jour. Am. Chem. Soc.*, 1917, xxix, 68.

2. Hempel, W., *Gassanalytische Methoden*, 4 Aufl., 141

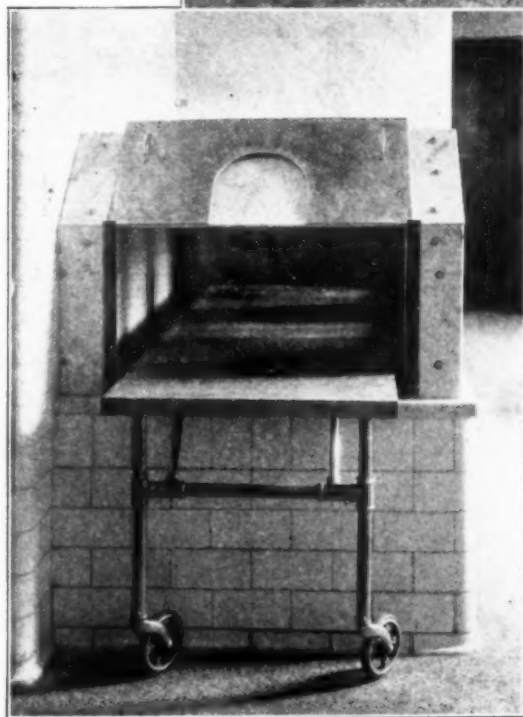
3. Karsner, H. T., *Jour. Exp. Med.*, 1916, xxiii, 149.



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*Below:
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hands are required to manipulate the door handles properly. For passing articles into the chamber the lock is used. Communication with persons outside may be had through a speaking tube and a bell. The only duty which the nurses have other than the care of the patient is recording the wet and dry bulb temperatures.

Cost of Construction Not Standard

The cost of construction of this chamber cannot be regarded as standard because considerable experimentation

was necessary throughout. The chamber probably could be duplicated for a sum not greater than four or five thousand dollars. In the light of the expense of such installations such as mechano-therapeutic and hydro-therapeutic equipment in general hospitals, this sum does not seem unduly large, provided the efficacy of oxygen therapy is established.

For maintenance, an approximate estimate of five to six dollars per day should cover the cost of oxygen, soda lime and power.

THE SCIENCE OF SPOTTING: PART II SPECIFIC STAINS AND THEIR REMOVAL*

BY EDNA I. AVERY, HEAD OF TEXTILES AND CLOTHING, STATE COLLEGE OF WASHINGTON, PULLMAN, WASH.

ACIDS. If any acid drops upon cloth neutralize it by spotting with ammonia. Some acids will remove color in material but if ammonia is used immediately the color will return. After this wash with vinegar (acetic acid).

Blood. (1) If the color of the cloth will stand water soak in cold water first until the stain turns brown, then rub out with soap and warm water. Naptha or any good neutral soap is best. (2) If the stain is resistant (hard to remove) add a teaspoonful of turpentine to the water.

(3) For blood stains on colored materials where water might cause the colors to run, spot with glacial acetic acid, as colors do not easily run with this acid. (4) Menstrual blood is best removed by soaking in cold water and then washing in very hot water and ammonia. Bleaching in the sun will remove the last trace of color. This must be done while the stain is fresh. (5) Soak in soda and water for several hours, then wash.

Bluing. There are several types of blues on the market and each requires a slightly different treatment to remove the color. *Ultramarine* blue comes in ball form and is a finely divided powder held in that shape. (1) It is insoluble in water so that if fresh it is but necessary to soak the material in water or hold under a faucet and let plenty of water run through the cloth. (2) The color is changed to white by dilute acids. Thus one should use mild acetic acid, then thoroughly rinse the cloth in water. *Prussian blue.* This is bottle bluing and can be told by adding a few drops to some water in a glass and then add a little washing soda. If the color turns a red to brown it is Prussian blue. If soaking and washing in cold water do not remove the stain then boil until stain disappears.

Aniline blue. This is a blue that will dissolve in water and is distinguished from the ultramarine blues by its clearness. When washing soda is added it does not change color. This distinguishes it from Prussian blue. Since the base is the same as dyes for cloth this blue may be difficult to remove. (1) Soak in cold water for some time, if this is not satisfactory, boil. (2) Use javelle water.

Chocolate and cocoa. (1) Scrape off any solid material that may be on the cloth, then soak in cold water to loosen the protein in the milk that may be in the spot and dissolve the fat left in hot water. (2) If stain still remains soften with a little glycerine and try hot water. Bleach if necessary. (3) Sprinkle with borax and soak in cold water. Bleach if needed.

Coffee (without milk or cream). Place spot over a bowl and pour boiling water through it. If resistant, soften with glycerine or use a bleacher, such as javelle water or potassium permanganate.

Coffee (with milk or cream). Soak in cold water first then pour boiling water through spot. Use a bleach if necessary.

Cream and milk.—Soak in cold water, then use neutral soap and water, hot water if necessary.

Dye. This is another difficult stain to remove for the reason that a good dye should be permanent. If the dye stain is another color there is added difficulty for what will remove one color is likely to remove most other colors. One needs to proceed with caution. Try the following:

(1) Moisten with ammonia.
(2) Hot alcohol may remove red color. Be careful in heating alcohol, for it quickly catches fire. The safest way is to put a little in a cup or glass and then put that in a dish of hot water.

(3) A hot solution of alum may remove some colors.
(4) Lactic acid is said to remove some colors.
(5) Daub with strong Burmol solution, steam, rinse and neutralize with acetic acid. Burmol does not harm white silk or satin.

(6) Dye stains from artificial flowers may be removed with ammonia followed by hot alcohol.

(7) Strong alkaline soaps and waters will remove some acid dyes which are largely used on silk and wools.

(8) To get pink or red out of white goods put enough sulphuric acid in water to make sour. Leave goods in it for five minutes then put in javelle water and rinse well.

Egg. Begin with cold water to soften the albumen, then wash with hot water and soap. If this does not remove the stain try a grease solvent and finally a bleacher.

Fruit. Most fruits leave stains which can be removed by pouring boiling water from a height. Peach stains are harder to remove than most fruit stains.

(1) Wet the spot with water then burn a little sulphur under the stain. Put the powdered sulphur in a dish and set fire to it. Use but a pinch, as sulphur fumes are choking.

(2) Lemon juice and sunlight, acetic acid, oxalic acid, any of these may be tried if the boiling water does not succeed. Finally bleach if necessary with javelle water or potassium permanganate.

Grass. (1) This stain comes from the coloring matter in the grass and can be dissolved in alcohol. After that cold water and soap if necessary or bleach.

(2) The coloring matter is soluble in ammonia. Try that.

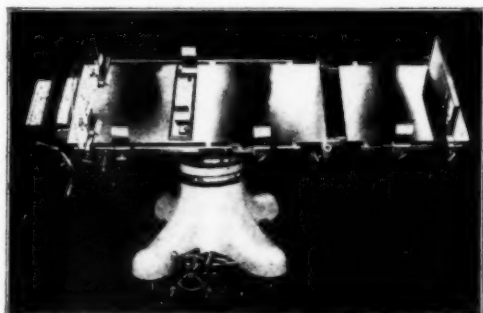
*This is the second of two articles on the subject of spotting prepared for THE MODERN HOSPITAL, by Miss Avery. The first article was in our January issue.

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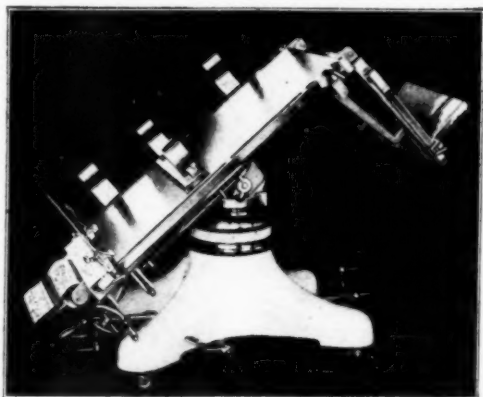
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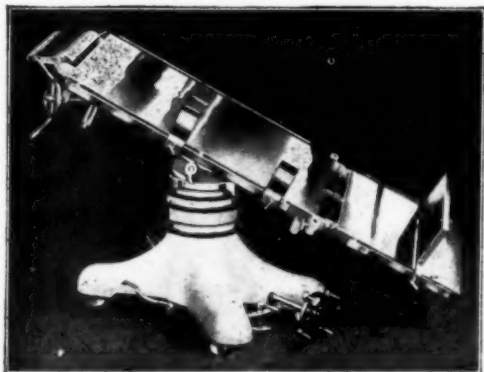
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(3) Wash with naphtha soap.

(4) Try ether.

Grease. When the stain is butter scrape off any solid material on the cloth. Wash in warm water and soap. Naphtha soap is preferable.

When salad oils, try the above. If not successful, use carbon tetrachloride, gasoline, chloroform, ether and other solvents. If in very large amount, use an absorbent.

Paint, resin.—To loosen paint try a mixture of benzole and turpentine, then when loosened use soap and warm water. Turpentine is apt to leave a ring which benzole will remove. When using any chemical that is likely to leave a ring, daub it on with the tampion in a circle outside the spot and work toward the spot which is in the center of this ring. See that spot is face down on some thick pad. A mixture of acetone and benzole to which a little chloroform has been added will remove the ring and can be safely used on light colors.

Gum. Carbon tetrachloride will remove chewing gum. Place a piece of ice on the gum until it hardens. Crack and gently break off all that is possible, then dissolve the rest with chloroform.

Ink. Ink is apt to be very difficult to remove. In all cases one should proceed at once and unless one knows the composition of the ink try the least harmful remover first. Do not wash ink stains with soap, as the alkali in soap helps to fix the stain in cloth.

Printing ink. Since this is usually fine lamp black held by resin, linseed oil or turpentine one should use an oil solvent or rub lard on the spot and wash in the usual way.

Marking inks. Aniline is known by the directions which state that the cloth needs to be washed before it is ironed. These ink stains can hardly be removed. Try hot oxalic acid.

The silver nitrate requires ironing before washing in order to precipitate the silver. To remove, soak in javelle water then put in ammonia. For ink stains on dyed materials, try moistening with dilute hydrochloric acid, then add hydrogen peroxide that has some ammonia in it.

Iron inks. To find out if the ink is of an iron compound moisten stain with oxalic acid and if it turns brown or yellow, it is iron. Continued application of oxalic acid is good but less successful, though it does not harm the cloth a great deal. Rinse all applications of acids from cloth.

Copying inks. Mix ten per cent acetic acid with enough oxalic acid crystals to make a strong solution, then use one part of this to four of alcohol. Daub stain until it disappears. The danger lies in the fact that any color might run with this treatment.

Writing inks. It is difficult to say what to use, owing to the varying compositions of writing inks, but it would be well to try the least harmful first.

(1) Take any of the absorbent meals or powders listed and put on the spot. This will keep the ink from spreading and is especially good to take up an excess amount of ink.

(2) Soak the stain in fresh milk until it clabbers. This is not harmful to materials and is good if done as soon as the stain appears. In place of milk, lactic acid is substituted and the cloth remains in it from a half to one hour.

(3) Try javelle water.

(4) Try potassium permanganate and oxalic acid.

(5) Try salt and lemon juice.

Iodine and medicines. Iodine may be removed with alcohol or ammonia. With other medicines try alcohol and a bleacher.

Iron rust. Oxalic or acetic acid or salt and lemon are good if the stain is fresh. Cover the spot with salt and moisten with lemon juice. Let stand for sometime. Two parts of tartaric acid and one part powdered alum laid on like salt and lemon are more energetic and will not hurt the fiber. If the stain is not fresh, use hydrochloric acid and wash out well.

Lampblack and soot. Use kerosene, benzene, chloroform, ether, gasoline or carbon tetrachloride.

Mildew. If fresh, try washing; if not, bleach with javelle water or potassium permanganate and oxalic acid. Nothing may prove effective.

Mucous. Soak in a three per cent solution of boric acid and wash.

Paints and varnishes. (1) Spot with turpentine and then remove that with gasoline or try a mixture of turpentine and benzole. When loose use soap and water if color will stand it. (2) A mixture of acetone and benzole to which a little chloroform is added will remove paint and can be used on all fancy colors. (3) For machinery grease wet the spot and rub the stain with a cloth dipped in turpentine. Then place a piece of blotting paper beneath and on top of the spot and pass a hot iron over it several times. Wash with warm soapy water.

Perspiration.—(1) Moisten spots with strong sodium perborate solution, let stand for a while in the air and finally rinse thoroughly. (2) For woolen goods, try castile soap and distilled or soft water. (3) A mixture of one part ammonia, three parts alcohol, and three parts ether. (4) For all wash garments, just launder and bleach. (5) Daub with strong Burmol solution and rinse well. (6) Moisten with sodium perborate solution, let stand in the air and finally rinse well.

Pongee.—Never use a brush when spotting pongee. Use a piece of the material itself. As water spots pongee it should never be used. When it is necessary to use water it may be best to wet the entire garment. Steam, however, will assist in removing any waterspots that may be formed on pongee.

Pressing woolen garments.—Steam is the agent that acts in the pressing of clothes. The wool fiber under the action of steam is plastic and will assume the shape it is placed in and will be fixed there under the heat of an iron. To press well at home one should have as large and heavy an iron as possible. Brush the material and see that all nap is going to the right direction. Use a heavy unbleached cloth which must be well wetted out. Lay this upon the garment to be pressed and quickly pass over it the hot iron which immediately causes steam to rise. Continue to press with the iron by putting it down upon the garment with pressure and lifting it immediately and pressing upon another part. Do not iron. When the wet cloth becomes dry, remove and take a lighter weight dry cloth and continue the pressing. See that the iron is not hot enough to scorch the goods. Lift the cloth repeatedly after pressing to allow the steam to escape and to see how the pressing is progressing. Occasionally brush the material while doing so. Shiny spots may be removed by sponging with vinegar.

Retouching spots.—It will be impossible to remove some spots from colored materials without removing the dye in the material. In that case try to replace the dye by tinting in the proper color. To do this use: (1) water tints and touch the spot with a camel's hair brush dipped in the correct color. (2) Use French crayons and scratch on the color after which blend it in by rubbing it with a piece of soft cloth. Do not leave any outlines and fix the color by steaming it in. To steam hold the spot over the spout of the tea kettle. (3) Oil paints that have been



These are a few of the many hospitals in which you will find the Sunkist Fruit Juice Extractor

Bethesda Hospital, Cincinnati
Jewish Hospital, Cincinnati
Lutheran Hospital, Cleveland
Mt. Sinai Hospital, Cleveland
Grant Hospital, Columbus, O.
Presbyterian Hospital, Chicago
Lindlahr Institute, Chicago
and many others, everywhere

Why Doctors Urge Orange Juice for Convalescents

Supply it this sanitary, efficient way. Read how you can obtain this remarkable new machine at actual cost by our new plan:

SURELY it was in hospitals that the tissue-building food value of orange juice was first recognized—where it was first put on regular diet sheets of patients.

It is natural, then, that hospital authorities recognize the value of this amazing new machine which does in 10 seconds what formerly took many minutes to do—and in a much more cleanly, sanitary way. A way which saves one-fourth of the juice, by efficiently extracting from **THREE** oranges as much juice as normally was squeezed from **FOUR** by old-fashioned methods.

This new way is the Sunkist (*Electric*) Fruit Juice Extractor, and it is today being sold at the maker's cost price, on a plan of liberal payments, by the California Orange Growers in an altruistic move to increase the consumption of oranges for health.

Benefits of orange juice advertised

"*Drink an orange*" doctors tell parents, patients, today. Strong national advertising has told the same story.

The California Fruit Growers Exchange is a responsible organization of 11,000 individuals who specialize in growing uniformly good oranges and lemons, the best of which we market as "Sunkist." That name stands for much—in itself a guarantee. The same name is on every Sunkist Fruit Juice Extractor. It means quality and satisfaction to every institution which has one. We issue a guarantee with every machine sold. You are thoroughly protected.

And in the past five years the consumption of orange juice among the *healthy* has increased ten-fold.

In order to introduce the electric Sunkist Fruit Juice Extractor into the hospitals of the country, a new plan of payments has been

arranged. One of these labor-saving little workers will join your staff and pay for itself as it goes.

Find out about our plan, today

Everyone today knows this famous little machine. It is in use in thousands of drug stores, hospitals, hotels and restaurants. But do you know the sturdy, reliable mechanism, the strong guarantee which backs each machine?

There are many facts about the Sunkist Fruit Juice Extractor which we would like to send to you direct. Please write for further information—terms and prices.

Use the coupon below. Do not delay.

Sunkist

Fruit Juice Extractor

(Electrically Operated)

California Fruit Growers Exchange, Dept. of Fresh Fruit Drinks,
Div. 1402, 154 Whiting St., Chicago, Ill.
Please send me information regarding the Sunkist Fruit Juice
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City..... State.....

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Cloth-Lined Metal Weatherstrip

3 times more efficient

Various scientific tests show that even ordinary metal weatherstrip shuts out about two-thirds of the air leakage around a window: **While Athey Cloth-Lined Metal Weatherstrip eliminates another two-thirds.**

Practically speaking the leakage of air or dust through Athey Cloth-Lined Metal Weatherstrip is nothing. **It is so infinitesimal that it shows only in laboratory tests.**

The secret of the greater efficiency of the Athey is the cloth to metal contact—a contact that “seals” the windows without making them hard to open or close. And the Athey is the **only cloth-lined metal weatherstrip made.**

That's why it is being used on many of the finest buildings of all kinds, all over the country.

The only weatherstrip that can be successfully applied to metal sash.

Even when the metal sash is not absolutely true, the cloth and spring bronze contact is sufficiently resilient so that perfect results are obtained.

Athey Products



Perennial Window Shades, Cloth-Lined Metal Weatherstrips, Athey Disappearing Partitions
Athey Skylight Shades

Write for complete information and prices

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dissolved in gasoline or benzole may be used and steam the color in afterwards.

Rust.—See iron stains.

Scorch.—Scorch means that the fibers are being burned to ash and if too deep will be impossible to restore. (1) Moisten and put in the sun. (2) Wet a cloth with hydrogen peroxide and place over scorch, then press with a hot iron. (3) Potassium permanganate and oxalic acid. (4) Use a scorch mixture prepared as follows—peel, slice and pound one onion, add two ounces washing soda, one-half teaspoon of vinegar and two ounces Fuller's earth. Boil all ten minutes and bottle after straining. Spread this over the scorch and allow it to dry. Then rub off.

Shoe polish.—For black, use soap and water or turpentine. For tan, use alcohol.

Sirups.—Use water.

Soup.—This as well as small grease stains are removed by sponging with hot water to which a little soda, borax or ammonia have been added.

Stove polish.—(1) Use cold water and soap. (2) Use gasoline, kerosene or benzole.

Tea.—When this stain is fresh it is not hard to remove. With milk-soak in cold water then pour hot water from above. When stains are deep, borax added to the soaking water is a help. Without milk—pour boiling water from a height. If necessary, bleach in the sun or use hydrogen peroxide or potassium permanganate. Glycerine will soften tea stains and might be used on bad stain first.

Vaseline.—Use a grease solvent as gasoline or turpentine. The ring from the last named must be removed by gasoline or benzole.

Walnut stains.—Strong soap and javelle water will best remove this stain.

Water spots.—Steam out by holding wrong side to the spout of a tea kettle.

Wax, tallow and parafin.—Scrape off as much as possible. (1) Use blotting paper or unglazed brown paper and press with a warm iron. (2) Benzole or gasoline. (3) If color remains use alcohol or a bleacher. Try burmol. (4) Place a wet linen rag beneath and a blotter on top of the spot and pass a warm iron over the blotter. If this is not successful place a blotting paper beneath it and moisten the spot with a little chloroform.

Summary

The success of spotting is a result of considering several phases of the work—kind of fiber in the cloth—whether cotton, wool, silk, etc., texture of material—whether it will stand rubbing and handling—color—nature of stain and character of spotting material used. Every failure to remove the stain only adds to one's difficulty, hence try to select the best method first.

One must remember the three methods that may be pursued—dissolving the stain, absorbing it, or bleaching the color out. This means that you should know these chemicals and their action upon cloth.

Remember that some stains are combinations of ingredients as, for instance, punch which contains sugar, water, and fruit juices. This means that various spotting agents may have to be used as one will remove the sugar and another the fruit color.

Great care must be taken, for to remove stains is an art. Cleanliness, caution in not getting the stain remover over any larger space than necessary, proper pads upon which to work, plenty of light and air and keeping the hands away from the liquids are rules to be strictly observed.

THE beauty, warmth and dignity of Stedman Reinforced Rubber Flooring have served to give an air of cheerfulness and confidence to each hospital, old and new, in which it has been installed.

Stedman Flooring will not dent or crack, nor will the veinings and soft colorings wear off, but rather improve with each year of use.

In the wards, corridors and operating rooms, Stedman Flooring fulfils every hospital requirement.

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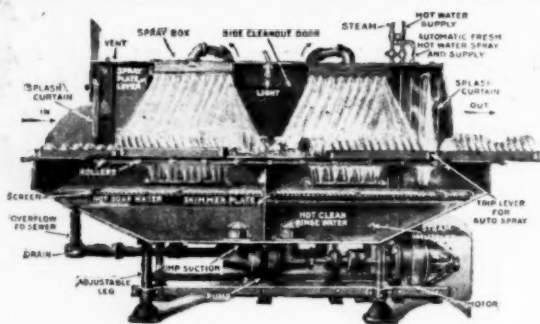
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We sell direct to Hospitals, and no doubt there is a baker in your town baking this bread.

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NICKEL-PLATED PRESSED STEEL CASTERS

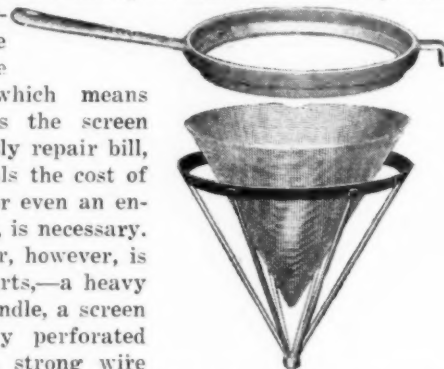
Improved rubber tire hospital casters with nickel plated pressed steel parts, as a new feature, are now on the market. The nickel plated casters are made with the popular three-inch wheels which are adapted both to round and square tubing of hospital equipment. The casters can also be supplied with special fitting or attachments which will make its use practical on all types of hospital beds, wagons and movable equipment.



Because of their lightness, higher finish and lower cost, these nickel-plated pressed steel casters can be more widely used.

A THREE-PIECE CHINESE STRAINER

A new improved type of Chinese strainer, that should prove of interest to every hotel and restaurant operator because of the great economy it effects has recently been put on the market. The old style strainer is made in one piece which means that as soon as the screen wears out, a costly repair bill, which often equals the cost of a new strainer, or even an entire new strainer, is necessary. This new strainer, however, is made in three parts,—a heavy malleable iron handle, a screen of extra heavy perforated white tin and a strong wire guard, all fastened together with three small screws. Thus when it becomes necessary to replace a screen, the wire guard is quickly removed, a new screen slipped in place and the guard replaced, all in a few minutes. It can be readily seen that this new type of strainer will quickly pay for itself in time and repair charges saved.

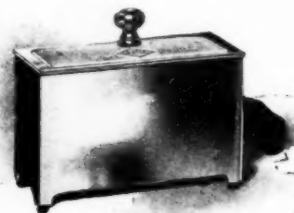


SYRINGE STERILIZER

A new portable sterilizer for syringes has just appeared on the market. It operates by electricity and brings water to the boiling point in three to four minutes. The tray is 5½ inches long and will hold any syringe up to and including the 20 C.C. size.

It is particularly convenient for carrying when making calls, and may be put into the bag or overcoat pocket.

Many physicians whose diabetics are taking insulin at home are recommending the use of this sterilizer as a precautionary measure in sterilizing syringe and needle.





For Better Toast— and Happier Patients

IN scores of hospitals in the United States, crisp, tender, piping-hot toast, made by the TOASTMASTER, is contributing daily to the happiness of patients—it's wonderful how such a small item helps them to start the day right!

TOASTMASTER

Automatic Electric Toaster

The TOASTMASTER is completely automatic, simple to operate, fast. The quality of the toast does not vary. Crisp, tender, beautifully golden brown all over and **piping hot!** The TOASTMASTER requires no watching; when the toast is done, the current is automatically shut off. While the nurse is serving one patient the toast is automatically made for the next.

The TOASTMASTER saves time, saves bread, saves money and gives the patients a real treat at every meal.

Write for Hospital Facts.

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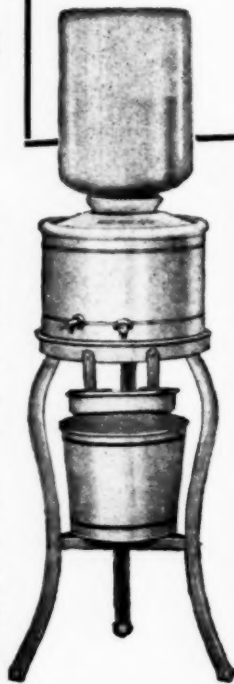
No Watching!

No Burning!

Relieving Nurses AND Patients Alike!

Fever wracked patients demanding water—harried nurses flying to and fro—and “XXth CENTURY” Coolers strategically placed throughout wards and corridors—bringing relief to patients and nurses alike!

This is the story we hear so often from hospitals using “XXth CENTURY” Coolers. Thousands of needless steps are taken daily by nurses—to and fro—supplying their patients with the ever demanded “drink of water, please!”



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Energy thus expended can only mean lessened efficiency and time for those “little touches” which contribute so much to the comfort of patients and the reputations of medical institutions.

“XXth CENTURY” Coolers are increasingly proving their efficiency in relieving nurses and patients alike by supplying readily accessible drinking water at all times.

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Gentlemen: Please send complete information about your coolers including the other 6 reasons for their use.

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A NEW SACCHAROMETER

The saccharometer, shown here, has been designed to meet the new demands made on urinalysis in connection with the administration of insulin.

As a qualitative test for sugar the fermentation test has always been recognized as preferable to all others excepting the polariscope and others requiring costly apparatus and great skill to perform. Attempts to make quantitative readings from the amount of gas produced have in the past met with little success and the difficulty of cleaning the fermentation tube has prevented the method from coming into popular use. Now, however, in the Tycos modification of the Lohnstein saccharometer we have an instrument that, while, retaining all the dependability of the fermentation test, gives in addition, a most accurate reading quantitatively.

This is accomplished by varying the distance between graduating lines to compensate for absorption of gas and in the later stages of the process for the loss through the displacement of the liquid into the open arm. A further refinement is introduced by constricting the curved portion of the tube which allows it to be sealed by a small globule of mercury.

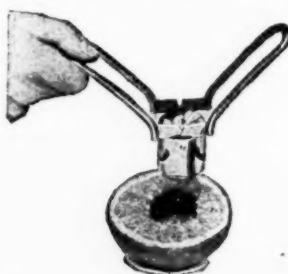
The closed arm has a removable stopper making the instrument extremely easy to clean.

This makes it available for the patient's use, as breakage is reduced to a minimum and the technique is simple. As diabetic patients leave the hospital many physicians are supplying the patient with an outfit as recommended by Wilders, Foley and Ellithorpe of the Mayo Clinic, Rochester, Minn., and allowing them to make their own routine analysis under the supervision of the physician. In the choice of an instrument for this purpose the new Tycos Lohnstein should receive careful consideration.



GRAPEFRUIT CORER

The new grapefruit corer, shown here, has been de-



signed to remove the core, seeds and pithy parts of the grapefruit quickly and neatly. The three illustrations show the device in the positions taken to prepare the grapefruit for serving.